[Strictly in accordance with the new Education Policy of the NCERT under the CCE (Comprehensive and Continuous Evaluation) System]

MATHS Fiesta

Teacher's Manual

Class: 3, 4, 5

Activity-based Learning



													2	20	
										Class 3	·		3 -	28	
														70	
										Class 4	:	4	29 -	/0	
										o		7.4		0.4	
									$\mathbf{U}^{(i)}$	Class 5	:	/	- 1	31	

Published by: First Step Books, New Delhi

Visit us at : www.firststepbooks.com

E-mail : firststep_books@yahoo.com

Concept by : Womsee Infotech

© Publishers

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means: electronic, mechanical, photocopying or otherwise, without the prior written permission of the publishers.

Disclaimer : Every possible effort has been made in bringing out the text in this book correctly and completely to fulfil the aspirations of readers. The Publishers and Author do not take any warranty with respect to the accuracy of the book and hence cannot be held liable in any way for any loss or damages whatsoever.

Review of Numbers (up to 999)

(1)

Exercise 1.1

1.	Fill	in tl	he blan	ks :								
	(a)	9		(b)	10			(c)	100	, 99	9	
2.	Wr	ite 5	71 to 59	90 :								
	571	,	572,	573	,	574	-,	575	5,	576	5,	577.
	578	,	579,	580	,	581	,	582	2,	583	s,	584,
	575		586,	587	,	588	,	589),	590		
3.	Wr	ite 7	91 to 81	10:								
	791	,	792,	793	,	794	-,	795	5,	79	6,	797,
			799,									
	805	,	806,	807	,	808	,	809),	810		
4.	Fill	in tl	he blan	ks :								
	(a)	<u>630</u>	<u>, 63</u>	<u>81,</u>	<u>632</u>	.,	633	,	634	,	63	5,
		636	i, 63	37,	638	,	639					
	(b)	<u>891</u>	<u>, 89</u>	<u>92</u> ,	893	,	<u>894</u>	,	895	,	89	6,
		897	, 89	98,	899	,	900).				
	(c)	421	<u>, 42</u>	<u>20,</u>	<u>419</u>	,	418	,	417	,	41	6,
		415	, 41	4,	413	,	412					
				2	Exe	rcis	e 1.	2				

- 1. Write the numbers : (a) 41 (b) 213 (c) 324 2. Fill in the blanks : (a) 4, 9, 3 (b) 2, 8, 7, (c) 6, 0, 9 (d) 2, 4, 5 (e) 0, 8, 6 (f) 9, 8, 5
- 3. Write in the short form : 456, 509, 100

1

4. Write in the expanded form : 864 = 800 + 60 + 4, 42 = 40 + 2215 = 200 + 10 + 5

Exercise 1.3

1. Fill in the blanks :

Number	Digit	Place Value	Digit	Place Value	Digit	Place Value
783	7	700	8	80	3	3
837	8	800	3	30	7	7
78	7	70	8	8		
994	9	900	9	90	4	4
546	5	500	4	40	6	6
105	1	100	0	0	5	5

2. Write in words :

- 574 = Five hundred seventy-four,
- 269 = Two hundred sixty-nine,
- 712 = Seven hundred twelve,
- 983 = Nine hundred eighty-three,
- 590 = Five hundred ninety,
- 604 = Six hundred four,
- 848 = Eight hundred forty–eight,

- 357 = Three hundred fifty-seven,
- 957 = Nine hundred fifty-seven,
- 774 = Seven hundred seventy-four,
- 469 = Four hundred sixty-nine.

Exercise 1.4

1.	Wri	te the pr	edecesso	r:				
	<u>62</u> –	63,	<u>79</u> – 80),	<u>221</u> - 222	2,	<u>367</u> – 368	3,
	<u>399</u>	- 400,	<u>648</u> – 6	549,	<u>749</u> – 75),	<u>89</u> – 90,	
	969	– <u>970</u> ,	<u>706</u> – 7	707.				
2.	Wri	te the su	ccessor :					
			80 – <u>81</u>	.,	222 – <u>223</u>		368 – <u>369</u>	,
	400	- <u>401</u> ,	649 – <u>6</u>	<u>50</u> ,	750 – <u>751</u>	.,	90 <u>-91</u> ,	
	970	– <u>971</u> ,	707 – <u>7</u>	<u>08</u> .				
3.			mber in b					
	78 –	<u>79</u> – 80,	200	- <u>201</u> -	202, 2	209 -	$\underline{210}-211$,
			871, 49 -	<u>50</u> –51,	7	/05 –	<u>706</u> - 707	,
		- <u>457</u> - 4						
4.			e pattern					
		595,	599,		603,		607.	
		710,	730,		750,		770.	
	(c)	820,	770,	,	720,		670.	
				 !-	- 1 F			
				Exercis	e I.5			
1.	W/mi	to > < or	r = in the	hlank .				
1.			87 < 98				78 < 87,	
							578 > 540	
							367 < 673	
	417	> 407.	816 > 2	15.	549 = 549	,).	644 < 694	
	986	> 968,	666 < 9	99, 3	325 > 235			7
2.					e largest		ber :	
	-	✓ 808					881	
	62	68	52	39	56		74 🗸	
	769	783	✓ 756	740) (720)	738	
	362				√ 536		749	
	276		275) 278	\checkmark	272	
	937		537				837	
	632	\sim	986		968		362	
3.			ending o					
					50,		70	
					55,	76,		
			689,	690,		962,		
	· /	708,	746,		769,	780,		
	(e)	30,	93,	309,	390,	903,	930	
4.	Wri	te in des	cending	order :				
	(a)	876,	620,	549,	395,	310,	301	
	(b)	764,	638,	520,	467,	386,	205	
	(c)	995,	905,	844,	590,	484,	448	
		850,	826,	763,	745,	637,		
		913,	775,	615,	508,	439,		
	<-/	- ,	,	- 7	,	,		



Exercise 1.6

					51013	e 1.0	, 				
1.	Add th	ese ni	ımbo	ers :		_					
	(a) (1) 2 $+ 5$ 8	5 6 1	4 3 1	(b)	$\frac{3}{4}$	1) 6 2 9	8 5 3	(c)	$\frac{6}{+1}$	① 5 3 9	8 7 5
	$ \begin{array}{c} \text{(d)} \textcircled{1} \\ 4 \\ + 5 \\ \hline 8 \end{array} $	7 4 1	2 5 7	(e)	$6 + 2 \\ 8$	① 5 3 9	7 5 2	(f)	$\begin{array}{r} (1) \\ 5 \\ + 2 \\ \hline 8 \end{array}$	① 3 6 0	9 3 2
	(g) (1) 4 + 5 9	3 4 8	4 7 1	(h)	$\begin{array}{r} (1) \\ 3 \\ + 4 \\ \hline 8 \end{array}$	7 3 0	5 1 6	(i)	$7 \\ + 1 \\ 8$	① 2 6 9	7 3 0
	$ \begin{array}{c} (j) & \textcircled{1} \\ 2 \\ + 6 \\ \hline 9 \end{array} $	5 5 0	3 4 7	(k)	$\begin{array}{c} \textcircled{1} \\ 3 \\ + 2 \\ \hline 6 \end{array}$	① 7 8 6	2 9 1	(1)	$\begin{array}{c} \textcircled{1} \\ 7 \\ + 2 \\ \hline 9 \end{array}$	① 6 5 2	4 8 0
2.	Subtra	ct and	ł wri	te :							
	(a) \bigcirc 6 -2 4	7 8 7 0	(12) 2 9 3	(b)	$\begin{array}{r} 7\\ 8\\ -6\\ 1 \end{array}$	(11) 2 8 3	14 4 8 6	(c)	$\begin{array}{c} 5 \\ 6 \\ -1 \\ 4 \end{array}$	16 7 7 9	13 3 8 5
	(d) $\begin{pmatrix} 4 \\ 5 \\ -2 \\ 2 \\ \end{pmatrix}$	(17) 8 9 8	(13) 3 7 6	(e)	$\frac{3}{-1}$	8 9 8 0	$\begin{array}{c} 13\\3\\9\\4 \end{array}$	(f)	$ \begin{array}{r} 5 \\ 6 \\ -4 \\ 1 \end{array} $	14 5 9 5	13 3 8 5
	(g) (2) 3 -1 1	9 0 9 0	(17) 7 9 8	(h)	$\bigcirc 3 \\ -2 \\ 1$	$\begin{array}{c} 3\\4\\1\\2 \end{array}$	(12) 2 9 3	(i)	$\begin{array}{r} 3 \\ 4 \\ -3 \\ \hline 0 \end{array}$	(11) 2 7 4	13 3 8 5
	$(j) \underbrace{5}_{6} \\ -2 \\ 3 \\ 3$	(12) 3 8 4	(17) 7 9 8	(k)	$\begin{array}{r} 6 \\ 7 \\ -4 \\ \hline 2 \end{array}$	(17) 8 8 9	(14) 4 6 8	(1)	$\frac{6}{7}$	9 0 8 1	10 0 8 2
				9	Exerc	cise	1.7				

Do yourself according to the given example :

Four-digit Numbers 2 Exercise 2.1 1. Write the following numbers in expanded form : [Fill the following numbers in boxes, respectively] : (b) 2, 3, 1, 9 (a) 1, 6, 8, 6 (c) 6, 5, 4, 8 (d) 3, 5, 7, 8 (e) 8, 7, 6, 0. 2. Write the number represented by each abacus : (a) 2143 (b) 4218 (c) 2046.

3. Write the number–names :

(a)	1,236	=	One thousand two hundred thirty-six
(b)	3,672	=	Three thousand six hundred seventy-two

- (c) 5,400 = Five thousand four hundred
- (d) 7,905 = Seven thousand nine hundred five
- (e) 8,880 = Eight thousand eight hundred eighty.

		U	U	U
4.	Write in figure	s:		
	(a) 6,342	(b) 4,0)56 (c) 7,230
	(d) 1,204	(e) 2,0	007	
5.	Write the next	four numbers	s:	
	(a) 1022	1022	1024	1025

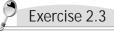
(a)	1022,	1023,	1024,	1025.
(b)	4279,	4280,	4281,	4282.
(c)	7006,	7007,	7008,	7009.
(d)	6332,	6333,	6334,	6335.
(e)	8457,	8458,	8459,	8460.

Exercise 2.2

Express these numbers in expanded notation :

(c) $7000 + 700 + 70 + 7$ (d) $6000 + 500 + 90 - 700 + 700 $	- 9
(c) 1000 + 100 + 10 + 1 (d) 0000 + 300 + 90 + 90 + 90 + 90 + 90 + 9	- 0
(e) $5000 + 800 + 90 + 2$ (f) $3000 + 400 + 50 - 3000 + 400 + 50 - 3000 + 400 + 50 - 3000 + 400 + 50 - 3000 + 400 + 50 - 3000 + 400 + 50 - 3000 + 400 + 50 - 3000 + 400 + 50 - 3000 + 400 + 50 - 3000 + 400 + 50 - 3000 + 30000 + 30000 + 30000 + 30000 + 3000 + 30000 + 3000 + 30000 + 3$	- 4

(g) 2000 + 600 + 60 + 3 (h) 8000 + 300 + 20 + 1(i) 7000 + 200 + 80 + 3 (j) 8000 + 400 + 50 + 1



1. Write the place value of the underlined digits in the following numbers :

(a)	800,	(b)	1,	(c)	80,
(d)	2000,	(e)	0,	(f)	3000,
(g)	400,	(h)	1,	(i)	1000,
(j)	8000,	(k)	90,	(1)	500.

2. Write the place value of each digit in the following numbers :

(a)	3 — 3000,	2 — 200,	1 — 10,	6 — 6
(b)	2 — 2000,	3 — 300,	6— 60,	5 — 5
(c)	1 — 1000,	8 — 800,	3— 30,	0 - 0
(d)	9 — 9000,	1 — 100,	8 — 80,	0 - 0
(e)	3 — 3000,	5 — 500,	1 — 10,	7 — 7
(f)	4 — 4000,	5 — 500,	7 — 70,	3 — 3
(g)	2 — 2000,	8 — 800,	9 — 90,	0 - 0
(h)	3— 3000,	1 — 100,	3 — 30,	3 — 3

Exercise 2.4

1. Write the consecutive numbers between the following numbers :

(a)	6100,	6101,	6102,	6103,	6104,	6105
(b)	2001,	2002,	2003,	2004,	2005,	2006
(c)	3999,	4000,	4001,	4002,	4003,	4004
(d)	3577,	3578,	3579,	3580,	3581,	3582
(e)	5683,	5684,	5685,	5686,	5687,	5688
(f)	4024,	4025,	4026,	4027,	4028,	4029
(g)	1120,	1121,	1122,	1123,	1124,	1125
(h)	7000,	7001,	7002,	7003,	7004,	7005
(i)	6755,	6756,	6757,	6758,	6759,	6760
(j)	3205,	3206,	3207,	3208,	3209,	3210

2.	Wr	ite five num	bers f	forwards and backwards starting
	wit	h the followi	ng nu	mbers :
	(a)	Forwards	\rightarrow	1908, 1909, 1910, 1911, 1912
		Backwards	\rightarrow	1908, 1907, 1906, 1905, 1904
	(b)	Forwards	\rightarrow	3989, 3990, 3991, 3992, 3993

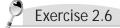
Backwards 3989, 3988, 3987, 3986, 3985 \rightarrow (c) Forwards \rightarrow 7690, 7691, 7692, 7693, 7694 Backwards 7690, 7689, 7688, 7687, 7686 \rightarrow (d) Forwards \rightarrow 3399, 3400, 3401, 3402, 3403 Backwards \rightarrow 3399, 3398, 3397, 3396, 3395 (e) Forwards 2009, 2010, 2011, 2012, 2013 \rightarrow Backwards 2009, 2008, 2007, 2006, 2005 \rightarrow (f) Forwards \rightarrow 7354, 7355, 7356, 7357, 7358 Backwards \rightarrow 7354, 7353, 7352, 7351, 7350 (g) Forwards \rightarrow 8290, 8291, 8292, 8293, 8294 Backwards 8290, 8289, 8288, 8287, 8286 \rightarrow (h) Forwards → 1345, 1346, 1347, 1348, 1349

Backwards \rightarrow 1345, 1344, 1343, 1342, 1341

Exercise 2.5

Complete the following table :

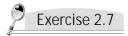
Predecessor	Number	Successor
1134 - 1 = 1133	1134	1134 + 1 = 1135
1239 - 1 = 1238	1239	1239 + 1 = 1240
1448 - 1 = 1447	1448	1448 + 1 = 1449
1758 - 1 = 1757	1758	1758 + 1 = 1759
2760 - 1 = 2759	2760	2760 + 1 = 2761
3764 - 1 = 3763	3764	3764 + 1 = 3765
4865 - 1 = 4864	4865	4865 + 1 = 4866
5735 - 1 = 5734	5735	5735 + 1 = 5736
3037 - 1 = 6036	6037	6037 + 1 = 6038
7048 - 1 = 7047	7048	7048 + 1 = 7049
7556 – 1 = 7555	7556	7556 + 1 = 7557
8273 - 1 = 8272	8273	8273 + 1 = 8274
9486 - 1 = 9485	9486	9486 + 1 = 9487



1. Write >, < or = in the blanks :

	364	7 < 4867	,	7733 >	7373,	999	0 < 1002,
	345	1 < 3468	,	8045 <	9405,	900	0 > 5000
	764	0 = 7640	,	6489 >	6479,	493	5 > 4930,
	146	3< 1863,		5445 >	4245	906	64 < 9800,
	578	9 = 5789	,	6000 >	5999	934	6 < 9436.
2.	Wr	ite the sn	naller n	umber :			
	(a)	1014	(b)	3389	(c) 32	56 (d)	6374
3.	Wr	ite the gr	eater n	umber :			
	(a)	4875	(b) 44	33 (c)	8420	(d) 87	00
4.	Rin	g (() the	e smalle	r and ticl	k (✔) the	largest n	umber :
	(b)	9945	9965 🗸	9954	9963	9948	9932
	(c)	7695	7659	(7569)	7956	7596	7965 ✓
	(d)	5200	5300 🗸	5020	5030	5099	(5009)
	(e)	9604 🗸	3644	5549	(3230)	5958	7577
5.	Wr	ite in des	cending	g order :			
	(a)	5430,	4846,	3167,	2200,	1359,	980
	(b)	8000,	7000,	6000,	5000,	1000,	900
	(c)	8439,	6875,	6659,	5650,	4934,	2389

	(d)	9846,	9683,	8932,	8646,	7948,	7693
	(e)	3965,	3956,	3695,	3659,	3596,	3569
	(f)	4870,	4780,	4708,	4087,	4078,	870
6.	Wr	ite in asc	ending o	order :			
	(a)	4035,	4053,	4305,	4350,	4503,	4530
	(b)	300,	600,	800,	3000,	6000,	8000
	(c)	3499,	3522,	4395,	4399,	5476,	6743
	(d)	4444,	4613,	5830,	6349,	8922,	9643
	(e)	3459,	3594,	4359,	4953,	5439,	5934
	(f)	2028,	2082,	2208,	2280,	2802,	2820
	(g)	5678,	5687,	7568,	7586,	7865,	8765



Form	the	greatest	and	the	smallest	four-digit	numbers
with th	he gi	ven digits	:				

Digits	Greatest number	Smallest number
(a) 3,7,5,5	7553	3557
(b) 4,2,8,0	8420	2048
(c) 6,4,5,2	6542	2456
(d) 9,1,8,3	9831	1389
(e) 2,6,3,9	9632	2369
(f) 8,0,5,8	8850	5088
(g) 3,0,4,8	8430	3048
(h) 9,5,5,7	9755	5579
(i) 6,1,1,0	6110	1016
(j) 7,1,0,9	9710	1079
(k) 5,0,6,0	6500	5006
(1) 4,5,4,4	5444	4445

Revision

1. Fill in the blanks :

[Fill the blanks with the following digits, respectively] : (a) 2, 5, 8, 9 (b) 4, 5, 6, 9 (c) 7, 0, 8, 0 (d) 9, 9, 3, 5

- 2. Express these numbers in expanded notation :
 - (a) 4000 + 500 + 90 + 8 (b) 2000 + 600 + 60 + 3
 - (c) 7000 + 700 + 50 + 5 (d) 5000 + 500 + 90 + 0

3. Write the place value of the coloured digits in the following numbers :

(a) $2 - 200$	(b) $4 - 4000$	(c) $1-1$
(d) 8 — 8000	(e) 3 — 300	(f) 0 — 0
(g) 7 — 700	(h) 6—6000	
Write in econdin	a and an i	

4. Write in ascending order :

(a)	870,	4078,	4178,	4708,	4870
(b)	6349,	8022,	8922,	9604,	9643
(c)	3569,	3596,	3659,	3956,	3965
(d)	2200,	2202,	2220,	2280,	2809

5. Place proper sign (>, < or =) in the blanks : (a) >, (b) < (c) >, (d) =

ADDITION

Exercise 3.1

1. Add these numbers :

3

(a)	$ \begin{array}{r} 1 3 5 \\ + 2 4 1 \\ \hline 3 7 6 \end{array} $	(b)	$ \begin{array}{r} 8 & 8 & 7 \\ + 1 & 1 & 1 \\ \hline 9 & 9 & 8 \end{array} $	(c)	$ \begin{array}{r} 3 2 4 \\ + 5 4 2 \\ \hline 8 6 6 \end{array} $
(d)	$\begin{array}{r} 4 & 3 & 6 \\ + & 5 & 3 & 2 \\ \hline 9 & 6 & 8 \end{array}$	(e)	$ \begin{array}{r} 3 & 0 & 5 \\ + 2 & 7 & 4 \\ \hline 5 & 7 & 9 \end{array} $	(f)	$ \begin{array}{r} 2 & 2 & 6 \\ + & 6 & 7 & 3 \\ \hline 8 & 9 & 9 \end{array} $
(g)	$ \begin{array}{r} 2 & 8 & 9 \\ + & 4 & 1 & 0 \\ \hline & 6 & 9 & 9 \end{array} $	(h)	$ \begin{array}{r} 6 & 0 & 2 \\ + 3 & 7 & 7 \\ \hline 9 & 7 & 9 \end{array} $	(i)	$ \begin{array}{r} 4 & 1 & 3 \\ 1 & 2 & 1 \\ + & 4 & 4 \\ \hline 5 & 7 & 8 \end{array} $
(j)	$ \begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	(k)	$ \begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	(l)	$ \begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$

2. Write in columns and add :

(a)	2 3 4 + 3 4 5 5 7 0		3 6 8 + 1 3 1	. /	$7 \ 0 \ 4$ + 2 5 3
	579		499		957
(d)	$ \begin{array}{r} 3 & 4 & 3 \\ 2 & 1 & 0 \\ + 4 & 3 & 6 \\ \hline 9 & 8 & 9 \end{array} $	(e)	$ \begin{array}{r} 2 & 3 & 8 \\ 3 & 4 & 1 \\ + 4 & 0 & 0 \\ \hline 9 & 7 & 9 \end{array} $	(f)	$ \begin{array}{r} 6 5 2 \\ 1 3 3 \\ + 2 0 3 \\ \hline 9 8 8 \end{array} $

Exercise 3.2

1. Solve the following :

(a)	\bigcirc 6 + 2 8	① 0 8 9	9 1 0	(b) \bigcirc (1) 6 3 4 + 3 5 7 9 9 1	(c) (1) () $2 \ 6 \ 0$ $+ \ 3 \ 8 \ 7$ $6 \ 4 \ 7$
(d)	$\begin{array}{r} (1) \\ 2 \\ + 3 \\ \hline 6 \end{array}$	$\bigcirc 5 \\ 6 \\ 1$	7 1 8	(e) 1 \bigcirc 5 8 7 + 3 9 2 9 7 9	(f) (1) () $3 \ 4 \ 6$ $+ \ 4 \ 9 \ 3$ $8 \ 3 \ 9$
(g)	(1) 1 3 + 2 7	$\bigcirc 8 \\ 2 \\ 4 \\ 4$	4 0 3 7	(h) \bigcirc (1) 4 7 3 2 1 5 + 1 0 7 7 9 5	(i) \bigcirc \bigcirc 1 7 3 2 5 2 + 1 7 0 5 9 5

(j) 	① + 1	$\begin{array}{c} (1) \\ 3 \\ 8 \\ 2 \end{array}$	3	2 9	(k)① + 1	$\begin{array}{c} \textcircled{1} \\ 9 \\ 4 \\ \hline 4 \end{array}$	\bigcirc 6 7	6	(1)	1 +	(1) 5 7	0	5
_	I	2	3	1	-	1	4	3	9	_	1	2	9	9
(m)	1	\bigcirc	\bigcirc		(n) (]	\sim	1		(0)	(1)	1	\bigcirc	
		9		3			6	4	2			3	2	2
		6	2	2			8	3	5			8	3	5
	+	2	1	0		+	4	7	7		+	4	6	1
	1	7	8	5		1	9	5	4		1	6	1	8

2. Write in columns and add :

(a) \bigcirc (1) $3 \ 2 \ 2$ $+ \ 2 \ 4 \ 9$ $5 \ 7 \ 1$	(b) (1) (1) 1 6 7 + 2 0 8 $\overline{7 5}$	(c)	$ \bigcirc 1 \\ 6 5 2 \\ 2 0 7 \\ + 1 3 8 \\ 9 9 7 $
(d) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1	(e) 1 \bigcirc + 2 6 3 - 4 4 5	(f)	$\begin{array}{ccccccc} 1 & \bigcirc \\ 2 & 9 & 0 \\ 3 & 1 & 5 \\ + & 1 & 2 & 1 \\ \hline 7 & 2 & 6 \end{array}$
+ 5 3	(h) (i) (j) (j) (j) (j) (j) (j) (j) (j) (j) (j	(i)	$\begin{array}{c cccc} & 7 & 2 & 0 \\ \hline & 0 & 0 & 5 & 6 & 2 \\ & 7 & 0 & 3 \\ & + & 4 & 1 & 1 \\ \hline & 1 & 6 & 7 & 6 \\ \end{array}$



Add these numbers :

(a) $\begin{array}{cccccccccccccccccccccccccccccccccccc$	(b) $\begin{array}{r} 3 & 5 & 2 & 3 \\ + & 3 & 2 & 6 & 5 \\ \hline & 6 & 7 & 8 & 8 \end{array}$	+3053
	(e) $5 2 3 7$ + 4 1 5 2 9 3 8 9	(f) $\begin{array}{c} 3 & 0 & 0 & 3 \\ + & 2 & 7 & 2 & 6 \\ \hline 5 & 7 & 2 & 9 \end{array}$
$ \begin{array}{c} (g) & 6 & 3 & 5 & 3 \\ + & 2 & 4 & 4 & 6 \\ \hline & 8 & 7 & 9 & 9 \end{array} $	(h) 4527 + 2472 6999	
$\begin{array}{c} \text{(j)} & 3 & 1 & 8 & 2 \\ & + & 4 & 7 & 0 & 7 \\ \hline & 7 & 8 & 8 & 9 \end{array}$	$\begin{array}{c} (k) & 4 & 0 & 3 & 2 \\ + & 4 & 8 & 6 & 7 \\ \hline & 8 & 8 & 9 & 9 \end{array}$	+ 4 7 3 6
$\begin{array}{c} \text{(m)} & 3 & 8 & 2 & 3 \\ & + & 4 & 1 & 7 & 6 \\ \hline & 7 & 9 & 9 & 9 \end{array}$	(n) - <u>+</u> 	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
(o) $7 \ 3 \ 2 \ 5$ + 1 2 5 4 8 5 7 9	(p)	5 3 2 7 4 2 2 2 9 5 4 9

Exercise 3.4

B. Add these numbers :

(a) $(1)(1)(1)$ $2 \ 7 \ 5 \ 8$ $+ \ 4 \ 5 \ 8 \ 6$ $7 \ 3 \ 4 \ 4$	(b)	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
(d) $\begin{array}{c} (1) (1) (1) \\ 2 & 1 & 7 & 5 \\ + & 5 & 9 & 7 & 5 \\ \hline & 8 & 1 & 5 & 0 \end{array}$	(e)	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
2 3 7 5		$\begin{array}{cccccccccccccccccccccccccccccccccccc$
(j) $(1)(1)(1)$ $4 \ 1 \ 7 \ 6$ $+ \ 3 \ 8 \ 7 \ 8$ $8 \ 0 \ 5 \ 4$	(k)	$\begin{array}{c} (1) (1) (1) \\ 2 \\ 1 \\ 7 \\ 5 \\ 4 \\ 8 \\ \hline 6 \\ 1 \\ 6 \\ 1 \\ 6 \\ \hline \end{array} \begin{array}{c} (1) \\ 5 \\ 4 \\ 8 \\ 8 \\ 1 \\ 8 \\ 1 \\ 8 \\ 4 \\ \hline \end{array} \begin{array}{c} (1) \\ 5 \\ 4 \\ 8 \\ 8 \\ 8 \\ \hline \end{array} \begin{array}{c} (1) \\ 5 \\ 4 \\ 8 \\ 8 \\ 8 \\ 1 \\ 8 \\ 4 \\ \hline \end{array}$
$(m) (1) \ (1) $		$\begin{array}{cccccccccccccccccccccccccccccccccccc$
(p) $(1)(1)(1)$ 7 5 8 4 + 1 5 7 6 9 1 6 0	(q)	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
(s) $(1)(1)(1)$ 3 5 7 2 + 4 8 9 8 8 4 7 0		$\begin{array}{c} (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)$
(v) $(1)(1)(1)$ $6 \ 6 \ 6 \ 8$ $+ \ 2 \ 8 \ 8 \ 8$ $9 \ 5 \ 5 \ 6$	(w)	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
(y) $(1)(1)(1)$ 6 4 6 6 + 2 8 8 5 9 3 5 1	(z)	$ \begin{array}{c} (1) (1) (1) \\ 2 & 6 & 7 & 5 \\ + & 4 & 8 & 6 & 5 \\ \hline & 7 & 5 & 4 & 0 \end{array} $
	9	Exercise 3.5

Add these numbers :

(a)	111	(b) ①①① (
	3 2 2 4	2 3 2 5	3 2 9 6
	1 0 7 5	2 0 4 8	1 8 2 4
	+ 2 8 5 4	+ 1 7 9 5	+ 1 1 1 1
	7 1 5 3	6 1 6 8	6231

	(d) $(1) (1) (1)$ 4 8 6 7 1 5 2 7 + 2 0 3 4 8 4 2 8	(e) $(1)(1)(1)$ $2 \ 6 \ 4 \ 2$ $1 \ 8 \ 3 \ 5$ $+ \ 4 \ 4 \ 7 \ 7$ $8 \ 9 \ 5 \ 4$	
	$\begin{array}{c} (g) \\ 2 \hline 1 \\ 1 \\ 6 \\ 8 \\ 5 \\ 2 \\ 5 \\ 7 \\ 1 \\ + \\ 1 \\ 9 \\ 2 \\ 7 \\ \hline 6 \\ 1 \\ 8 \\ 3 \\ \end{array}$	(h) \bigcirc	(i) $(1) (2) (2) (2) (2) (2) (2) (2) (2) (2) (2$
	(j) $(1)(1)(1)$ 5 5 5 5 5 3 6 8 5 + 0 7 2 0 9 9 6 0	$ \begin{array}{c} \text{(k)} \textcircled{1} \textcircled{1} \textcircled{1} \textcircled{1} \\ 3 & 8 & 8 & 5 \\ 3 & 4 & 7 & 7 \\ + & 2 & 4 & 1 & 3 \\ \hline 9 & 7 & 7 & 5 \end{array} $	(1) $\begin{array}{c} (1) & (1) & (2) & (2) \\ 3 & 2 & 3 & 5 \\ 2 & 4 & 6 & 7 \\ + & 1 & 9 & 9 & 9 \\ \hline 7 & 7 & 0 & 1 \end{array}$
	2	Exercise 3.6	
1.	(d) 0	 (b) 574 (e) 0 (h) 2916 	 (c) 6164, 0 (f) 1975 (i) 4096
	2	Exercise 3.7	
a i	ş		-
Sol 1.	ve the following quest Toys produced in first Toys produced in next Total toys produced	week = 2	3 6 5 2
2.	Rahul's votes=Sohan's votes=Mohan's votes=Rejected votes=Total votes polled=	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	_
3.	Bulbs produced on firs Bulbs produced on sec Bulbs produced on thi Total bulbs produced i	$\begin{array}{ll} cond day & = \\ rd day & = \\ \end{array}$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
4.	Rakesh's monthly exp Rakesh's monthly savi Rakesh's monthly inco	ings <u>=</u> +	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
5.	Cost of old scooter Cost of its repair Total money Mohit sp	$= \begin{array}{c} & 6 \\ = + \begin{array}{c} 2 \\ = \end{array} \\ \end{array}$	2 4 9 4 6 9 7 1 8 Ans.
6.	Coconut trees in the ga Orange trees in the gar		2 1 4 9 2 6 4 9

Orange trees in the garden=2149Orange trees in the garden=2649Tamarind trees in the garden=978Mango trees in the garden=+649Total trees in the garden=6425



7.	Pages read by Mohan	=		`	1	2	1	4	
	Pages yet to read	=	+	`	1	2	1	9	
	Total pages in the storybooks	=	_	`	2	4	3	3	Ans.

Revision

1. Add the following numbers :

(a)	6354	(b) 2 2 6 0 (c) 6 6 5 4
	+ 3 2 3 4	+ 2 1 3 0 + 3 2 9 9
	9588	4 3 9 0 9 9 5 3
(d)	5934	(e) 3 1 4 9 (f) 4 8 6 7
	+ 3 9 4 4	1 6 8 5 2 0 3 4
	9878	+ 2 5 7 1 + 1 2 9 9
		7 4 0 5 8 2 0 0
(g)	2395	(h) 1 9 2 7
	3 0 4 8	2836
	+ 1 6 9 5	+ 4 9 9 3
	7 1 3 8	9756

2. Fill in the blanks :

	(a) 5259	(b)	3239, 3239 (c) 1234
	(d) 1023	(e)	5440
3.	Stamps Zaheer has		= 2468
	Stamps Amina has		= + 2 8 9 5
	Total stamps they have	e	= 5 3 6 3 Ans.

4.	Students in primary section	=		1	6	4	0	
	Students in middle section	=		1	0	0	1	
	Students in secondary section	=	+		9	8	4	
	Total students studying in the school	=		3	6	2	5	Ans.

5.	Difference between two numbers	=	1 8 7 6
	The smaller number	=	+ 7 9 4 8
	So, the large number	=	9824 Ans.

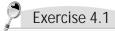
6. Single-storey buildings = $5 \ 6 \ 1 \ 7$ Double-storey buildings = $2 \ 3 \ 8 \ 1$ Triple-storey buildings = $+ \ 9 \ 4 \ 9$ Total buildings in the town = $\underline{8 \ 9 \ 4 \ 7}$ Ans.

7. Monthly expenses of the hostel are :

Food	=	`3	7	8	2	
Rent	=	•	7	4	8	
Otheritems	= +	`1	9	7	2	
So, the total monthly expenditure of the hostel	= _	`6	5	0	2	Ans.

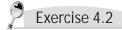
4

Subtraction



Subtract the following numbers :

(a)	$ \begin{array}{r} 8 & 8 & 6 & 3 \\ - & 7 & 0 & 5 & 3 \\ \hline 1 & 8 & 1 & 0 \end{array} $	(b)	$ \begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	(c)	9 8 3 2 - 7 6 2 1 2 2 1 1
(d)	$ \begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	(e)	$ \begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	(f)	5 2 9 8 - 3 1 6 3 2 1 3 5
(g)	$ \begin{array}{r} 8 & 6 & 4 & 7 \\ - 5 & 1 & 3 & 5 \\ \hline 3 & 5 & 1 & 2 \end{array} $	(h)	$9 \ 6 \ 7 \ 4$ $- \ 3 \ 1 \ 5 \ 2$ $6 \ 5 \ 2 \ 2$	(i)	$ \begin{array}{r} 6 8 4 9 \\ - 2 4 3 5 \\ \hline 4 4 1 4 \end{array} $
(j)	5 9 7 6 - 2 8 5 1 3 1 2 5	(k)	$ \begin{array}{r} 6 9 7 5 \\ -4 3 5 4 \\ \hline 2 6 2 1 \end{array} $	(1)	$ \begin{array}{r} 4 & 9 & 8 & 5 \\ - & 2 & 1 & 7 & 3 \\ \hline & 2 & 8 & 1 & 2 \end{array} $



1. Subtract these numbers :

(a) $(6) (1) (6) (1)$ 7 1 7 1 - 4 2 8 2 2 8 8 9	(b) $(6) 1 7 3 (c)$ 7 2 8 3 - 4 9 9 8 2 2 8 5	$\begin{array}{c} (7) (3) (2) (2) \\ 8 & 4 & 3 & 2 \\ \hline - & 6 & 8 & 9 & 7 \\ \hline 1 & 5 & 3 & 5 \end{array}$
(d) $(8) (2) (0) (2)$ 9 3 1 2 - 4 9 9 9 4 3 1 3	(e) $(3)(0)(2)(6) (f)$ $4 \ 1 \ 3 \ 6$ $-2 \ 8 \ 3 \ 7$ $1 \ 2 \ 9 \ 9$	3 (3) (2) (2) 4 4 3 2 -2 9 9 8 1 4 3 4
(g) $\begin{array}{c} (7) (12) (11) (12) \\ 8 & 3 & 2 & 2 \\ \hline - 6 & 9 & 4 & 8 \\ \hline 1 & 3 & 7 & 4 \end{array}$	(h) $(5)(12)(10)(12)$ $6 \ 3 \ 1 \ 2$ $- 2 \ 9 \ 8 \ 4$ $3 \ 3 \ 2 \ 8$	

2. Subtract and write :

Subtract and with		
(a) $6 10 12 12$ 7 1 3 2 - 5 8 4 9 1 2 8 3	$ \begin{array}{c} (6) \\ 4 \\ 3 \\ 2 \\ - \\ 2 \\ 8 \\ 7 \\ 9 \end{array} $	(c) (3) (5) (6) (2) 4 6 7 $2-1$ 9 8 62 6 8 6
(d) $(6) (10) (15) (13) (13) (13) (13) (13) (13) (13) (13$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	(f) $\begin{array}{c} 6 \\ 7 \\ -4 \\ 2 \\ 1 \\ 3 \\ -4 \\ -4 \\ 3 \\ 8 \\ 5 \\ \hline \hline 2 \\ 1 \\ 3 \\ 8 \\ \hline \end{array}$
(g) $(5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0$	$ \begin{array}{c} (1) & 0 & 0 & 0 \\ 7 & 8 & 2 & 8 \\ - & 6 & 9 & 1 & 9 \\ \hline $	(i) $\begin{array}{c} 7 & \hline 6 & \hline 3 & \hline 3 \\ 8 & 7 & 4 & 3 \\ \hline - 2 & 9 & 8 & 8 \\ \hline 5 & 7 & 5 & 5 \end{array}$

	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$						
	$ \begin{array}{c} (v) & (3) (10) (14) (17) \\ & 4 & 1 & 5 & 7 \\ \hline & -2 & 9 & 9 & 8 \\ \hline & 1 & 1 & 5 & 9 \end{array} \begin{array}{c} (w) (2) (13) (11) (12) \\ & -2 & 2 & 6 & 4 & 2 & 3 \\ \hline & -2 & 8 & 6 & 8 \\ \hline & 0 & 5 & 5 & 4 \end{array} \begin{array}{c} (x) (5) (13) (11) (13) \\ & 6 & 4 & 2 & 3 \\ \hline & 6 & 4 & 2 & 3 \\ \hline & -2 & 9 & 8 & 7 \\ \hline & 3 & 4 & 3 & 6 \end{array} $						
	Exercise 4.3						
1.	Apples in the trees in the garden=7856Apples fell down due to wind= $-$ 2977So, apples still left in the garden= $ 4$ 8 79Ans.						
2.	Sum of two numbers = 7 0 4 6 One number = $1 4 2 6$ So, the other number = $5 6 2 0$ Ans.						
3.	Sum of two numbers = $8 \ 0 \ 0 \ 0$ One number = $-3 \ 8 \ 1 \ 7$ So, the other number that should be added = $-3 \ 8 \ 1 \ 8 \ 3$ Ans.						
4.	Price of the radio = $\begin{array}{c} 2 & 8 & 0 & 0 \\ \hline Price of the transistor = 2 & 3 & 7 & 5 \\ \hline Difference of prices of both items = 4 & 2 & 5 \\ \hline & 4 & 2 & 5 \end{array}$ Ans. So, the radio costs more and by `425.						
5.	The population of the village = $6 \ 2 \ 1 \ 3$ The number of males = $-4 \ 8 \ 7 \ 5$ So, the number of females = $1 \ 3 \ 3 \ 8$ Ans.						
6.	Akash gave to the shopkeeper= 7 0 0 The cost of music system= $- 6$ 2 1 0 So, Akash got back= 7 9 0 Ans.						
7.	Number of purchased nails=5500Number of used nails= $-$ 4751So, the nails that left= $-$ 749Ans.						
8.							

a							
Exercise 4.4							
(b) Step 1: (1) (1) 9 3 5 + 3 1 4 8 - 4 0 8 3	Step 2: (3) (9) (7) (13)						
(c) Step 1: $(1) (1) (1) (-)$ $4 \ 8 \ 9 \ 5$ $+ 2 \ 7 \ 5 \ 8$ $7 \ 6 \ 5 \ 3$	Step 2: (6) (13) (14) (13) 7 6 5 $3-2$ 9 8 54 6 6 8 Ans.						
(d) Step 1: $(1) (1) (-)$ 8 4 2 0 + 9 8 5 -9 4 0 5	Step 2: $\bigcirc 3 \ 9 \ 15$ 9 4 0 5 $-2 \ 1 \ 9 \ 7$ 7 2 0 8 Ans.						
(e) Step 1: $\bigcirc 1 \bigcirc 1$ 7 1 9 8 + 2 6 2 1 9 8 1 9	Step 2: $\bigcirc 7 \bigcirc 1 \bigcirc 9 & 8 & 1 & 9 \\ -2 & 5 & 3 & 6 \\ \hline 7 & 2 & 8 & 3 \end{bmatrix}$ Ans.						
(f) Step 1: $\bigcirc 1 \bigcirc 0 \bigcirc 7 \ 2 \ 8 \ 5 \ 4 \ 8 \ 5 \ 4 \ 8 \ 5 \ 4 \ 8 \ 8 \ 5 \ 6 \ 8 \ 5 \ 6 \ 8 \ 8 \ 5 \ 6 \ 8 \ 8 \ 8 \ 8 \ 8 \ 8 \ 8 \ 8 \ 8$	Step 2: (7) (4) (4) 8 5 4 8 -2 9 5 0 5 5 9 8 Ans.						
(g) Step 1: $(1)(1)$ 7 8 9 6 +1362 9 2 5 8	Step 2: (8) (1) (15) 9 2 5 8 -3 4 7 2 5 7 8 6 Ans.						
(h) Step 1: $\bigcirc \bigcirc \bigcirc \\ 7 \ 6 \ 2 \ 4 \\ + 1 \ 0 \ 0 \ 0 \\ \hline 8 \ 6 \ 2 \ 4 \\ \end{vmatrix}$	Step 2: $7 \times 7 \times 10^{-2}$ Step 2: 7×10^{-10} Step 2: 7×10^{-10} Step 2: 7×10^{-2} Step 2: 7×10^{-2} Step 2: 10^{-2} Step 3: 10^{-2} Ste						
Exercise	e 4.5						
Sheets used by Ritu Sheets used by Prem Sum of used sheets = $\begin{bmatrix} 1 & \bigcirc & \bigcirc \\ 2 & 7 & 5 & 0 \\ = & + & 1 & 7 & 0 & 0 \\ \hline 4 & 4 & 5 & 0 \end{bmatrix}$							
Total sheets = 56000 Number of used sheets = -44500 So, the sheets left = 11500 Ans.							
$\begin{array}{c} (1) (1) (1) \\ 2 & 2 & 7 & 4 \\ + & 1 & 8 & 6 & 9 \\ \hline & 4 & 1 & 4 & 3 \end{array}$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$						
The number of children $= 857$ Ans.							

1.

2.

9

3.		\bigcirc	1	1			6	(14)	(14)	\bigcirc
		4	2	7	5		7	5	4	4
	+	3	2	6	9	_	3	6	5	0
	_	7	5	4	4		3	8	9	4

Soldiers remain in the camps = 3894. Ans.

4.		\bigcirc	\bigcirc	\bigcirc						\bigcirc
		2	0	0	0		9	8	7	5
	+	1	7	8	5	_	3	7	8	5
		3	7	8	5		6	0	9	0

The amount left with the man is ` 6090. Ans.

5.		1	1	1			4	(12)	(17)	\bigcirc
		2	2	5	1		5	2	1	0
	+	2	9	5	9	_	2	5	0	0
		5	2	1	0		2	7	1	0

2710 students were from Indian. Ans.

6.		\bigcirc	\bigcirc	1				\bigcirc	\bigcirc	\bigcirc	\bigcirc
		3	4	0	6			8	9	7	6
	+	2	5	6	4	-	_	5	9	7	0
		5	9	7	0	_		3	0	0	6

3006 cards are left. Ans.

1. Find the difference :

(a) $\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	(b) $5 \ 0 \ 3$ $- \ 3 \ 5 \ 2$ $1 \ 5 \ 1$	(c) $\begin{array}{r} 9 & 7 & 6 \\ - & 8 & 3 & 9 \\ \hline & 1 & 3 & 7 \end{array}$
(d) $\begin{array}{cccc} 7 & 1 & 1 \\ - & 3 & 9 & 8 \\ \hline & 3 & 1 & 3 \end{array}$	(e) $\begin{array}{r} 4 & 2 & 1 & 8 \\ - & 2 & 2 & 0 & 7 \\ \hline 2 & 0 & 1 & 1 \end{array}$	(f) $\begin{array}{r} 9 & 5 & 3 & 6 \\ \underline{-4 & 2 & 1 & 4} \\ 5 & 3 & 2 & 2 \end{array}$
$ (g) \begin{array}{c} 2 & 1 & 0 & 6 \\ - & 1 & 0 & 0 & 3 \\ \hline 1 & 1 & 0 & 3 \end{array} $	(h) $\begin{array}{r} 8 & 8 & 6 & 4 \\ - & 4 & 2 & 3 & 3 \\ \hline & 4 & 6 & 3 & 1 \end{array}$	(i) $\begin{array}{r} 5 & 2 & 1 & 8 \\ - & 4 & 4 & 0 & 7 \\ \hline & 0 & 8 & 1 & 1 \end{array}$
(j) $\begin{array}{r} 6 & 1 & 0 & 1 \\ - & 4 & 2 & 1 & 4 \\ \hline 1 & 8 & 8 & 7 \end{array}$	(k) $\begin{array}{c} 2 & 1 & 0 & 6 \\ - & 1 & 9 & 6 & 3 \\ \hline 0 & 1 & 4 & 3 \end{array}$	(1) $\begin{array}{r} 9 & 8 & 7 & 6 \\ \underline{-5 & 9 & 9 & 1} \\ \hline 3 & 8 & 8 & 5 \end{array}$

2. Solve the following :

(a)	$ \begin{array}{r} 6 & 8 & 4 \\ + 2 & 9 & 3 \\ \hline 1 & 9 & 7 & 7 \end{array} $	$ \begin{array}{r} 9 7 7 \\ -1 4 8 \\ \hline 8 2 9 \end{array} \text{ Ans.} $
(b)	$9 \ 4 \ 8 \\ + \ 3 \ 3 \ 6 \\ \hline 1 \ 2 \ 8 \ 4$	$ \begin{array}{r} 1 & 2 & 8 & 4 \\ \underline{- 5 & 8 & 9} \\ \hline 6 & 9 & 5 \end{array} $ Ans.
(c)	$ \begin{array}{r} 8 2 5 \\ + 2 5 4 \\ 1 0 7 9 \end{array} $	$\begin{array}{cccc} (-) & 3 & 2 \\ + & (-) & 4 & 6 & 8 \\ \hline & + & 5 & 0 & 0 \\ \hline & & 5 & 7 & 9 \\ \hline & & 5 & 7 & 9 \end{array} $ Ans.

	(d) $\begin{array}{cccccccccc} 1 & 2 & 8 & 6 & 3 & 9 \\ 4 & 6 & 9 & -9 & 8 \\ + & 4 & 2 & 5 & 4 & 1 \\ \hline 6 & 3 & 9 & \end{array}$ Ans.
3.	Number of bottles brought by children=350Number of consumed bottles= -1 92Number of bottles left= 1 5 8Ans.
4.	Students in camp A=427Students in camp B= $\frac{+3}{2}$ 6Total number of students in both camps= $\frac{7}{5}$ 5Total students=753Students that had left= $\frac{-3}{6}$ 65Number of students that remain in the camps= $\frac{3}{8}$ 8Ans.
5.	Amit gave to the shopkeeper= $59, 000$ Cost of bike= -58665 Amit got back= 0335 Ans.
6.	Sheets Smita used = 2 7 5 0 Sheets Prerna used = $+$ 1 7 0 0 Sum of used sheets = 4 4 5 0 Total sheets = 5 1 0 0 Used sheets = $-$ 4 4 5 0 Sheets that left = 6 5 0 Ans.
	5 Multiplication
	V

Exercise 5.1

1. Solve:

- (a) There are $\underline{3}$ oxen : One ox has $\underline{4}$ legs. So, the number of legs is 3 times 4. or, 4+4+4=12
- or $3 \times 4 = 12$
- (b) There are <u>5</u> children.One child has <u>10</u> fingers in two hands.
- Total number of fingers is 5 times 10.
- or 10 + 10 + 10 + 10 + 10 = 50

1

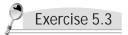
or $5 \times 10 = 50$

2. Complete the following table :

Repeated Addition	Multiplication fact					
(a)	$3 \times 4 = 12$					
(b) $5+5+5+5+5+5+5=35$						
(c)	$6 \times 3 = 18$					
(d) $6+6=12$						
(e)	$5 \times 4 = 20$					
Exercise 5.2						

1. Fill in the blanks :

(a) 7 (b) 1 (c) 0 (d) 0 (e) 2 (f) 9 (g) 7 (h) 4.



Complete the following tables by filling the missing numbers :

X	1	2	3	4	5	6	7	8	9	10
$\boxed{1}$	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	[10]	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	1 4	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

2	Exercise 5.4	
2	Exercise 5.4	

Find the product :

(a)	$\begin{array}{c} (1) \\ 1 & 3 \\ \times & 4 \\ \hline 5 & 2 \end{array}$	(b)	$\begin{array}{c} \bigcirc \\ 2 & 1 \\ \times & 6 \\ \hline 1 & 2 & 6 \end{array}$	(c)	$ \begin{array}{c} (4)\\ 1 & 8\\ \times & 5\\ \hline 9 & 0 \end{array} $
(d)	$ \begin{array}{r} 3 \\ 2 \\ $	(e)	$ \begin{array}{r} 2 \\ 6 \\ $	(f)	$ \bigcirc 8 1 $ $ \times 7 $ $ 5 6 7 $
(g)	$ \begin{array}{r} $	(h) \bigcirc 3 \times 31	$\begin{array}{c} (i) \\ 9 \\ \underline{8} \\ \underline{2} \\ \underline{5} \end{array}$	$\begin{array}{c} \\ 6 \\ \times \\ 9 \\ 4 \end{array}$	$(j) \qquad \begin{array}{c} (1) \\ 8 \\ 2 \\ \times 9 \\ \hline 7 \\ 3 \\ 8 \end{array}$
		Exe	ercise 5.5		

Find the product :

nu uic j	JIOuuces				
(a)	$\bigcirc \bigcirc \\ 2 3 2 \\ \times 3 \\ \hline 6 9 6 \\ \end{vmatrix}$	(b)	$\bigcirc \bigcirc \\ 1 2 1 \\ \times 4 \\ \hline 4 8 4 \\ \hline \end{matrix}$	(c)	$\bigcirc \bigcirc \\ 4 0 4 \\ \underline{\times 2} \\ \underline{8 0 8} $
(d)	$\bigcirc \bigcirc \\1 3 3 \\ \times 3 \\\hline3 9 9 \\\hline$	(e)	$\bigcirc \bigcirc \\ 3 \ 2 \ 4 \\ \times \ 2 \\ \hline 6 \ 4 \ 8 \\ \end{vmatrix}$	(f)	$\bigcirc \bigcirc \\ 1 1 1 \\ x 9 \\ \hline 9 9 9 9 \\ \hline \end{matrix}$
(g)	$ \bigcirc \bigcirc \\ 1 0 1 \\ $	(h)	$\bigcirc \bigcirc \\ 2 1 2 \\ \times 4 \\ \hline 8 4 8 \\ \hline \end{vmatrix}$	(i)	$\bigcirc \bigcirc \bigcirc \\ 1 0 5 \\ \times 5 \\ \hline 5 2 5 \\ \hline \end{bmatrix}$
(j)	$\bigcirc \bigcirc \bigcirc 2$ $2 1 8$ $\times 3$ $\overline{6 5 4}$	(k)	$ \begin{array}{c} (1) & (1) \\ 2 & 3 & 4 \\ $	(1)	$ \begin{array}{r} 3 3 \\ 3 6 5 \\ $

(m)	$ \begin{array}{r} (5) (5) \\ 3 8 9 \\ \times 6 \\ \hline 2 3 3 4 \end{array} $	(n)	$ \begin{array}{r} (1) \ \ 6) \\ 8 \ 1 \ 7 \\ \times \ 9 \\ \hline 7 \ 3 \ 5 \ 3 \end{array} $	(0)	$ \begin{array}{c} 2 & 4 \\ 1 & 3 & 6 \\ $
(p)		(q)	$ \begin{array}{c} (7) \\ 1 & 0 & 9 \\ \times & 8 \\ \hline 8 & 7 & 2 \end{array} $	(r)	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
(s)	$ \begin{array}{c} (2) & (4) \\ 1 & 4 & 8 \\ $	(t)	$ \begin{array}{c} (1) & (1) \\ 1 & 2 & 2 \\ & \times & 8 \\ \hline 9 & 7 & 6 \end{array} $	(u)	$\bigcirc \bigcirc \\ 3 3 2 \\ \times 3 \\ \hline 9 9 6 \\ \hline \end{vmatrix}$
(v)	$\bigcirc \bigcirc \bigcirc \\ 3 2 4 \\ \times 3 \\ \hline 9 7 2 \\ \hline \end{aligned}$	(w)	$\bigcirc \bigcirc \bigcirc \bigcirc (2)$ $1 1 9$ $\times 3$ $\overline{3 5 7}$	x)	$ \begin{array}{c} 2 & 2 \\ 2 & 8 & 9 \\ $
(y)	$ \begin{array}{c} (1) \bigcirc \\ 8 & 4 & 1 \\ \hline $	(z)	$\bigcirc \bigcirc \\ 2 3 3 \\ \hline \times 3 \\ \hline 6 9 9 \\ \hline \end{matrix}$		
nd the	e product of sh		ercise 5.6		

)8

Find the product of shortcut method :

(a)	90	(b)	80	(c)	390	(d)	450
(e)	1980	(g)	3200	(g)	6750	(h)	5400
(i)	500	(j)	300	(h)	3400	(1)	4500
(m)	2900	(n)	9900	(0)	7800	(p)	6600
(q)	3000	(r)	8000	(s)	1000	(t)	9000
(u)	5000	(v)	4000	(w)	7000	(x)	6000

Exercise 5.7

Find the product :

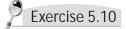
(a)	680	(b)	560	(c)	880	(d)	1860
(e)	820	(f)	2450	(g)	960	(h)	6900
(i)	12800	(j)	8000	(k)	24800	(1)	55200
(m)	6000	(n)	19000	(0)	8600	(p)	6000
(q)	15500	(r)	8000.				

Exercise 5.8

Find the product :			
(a) 🔿	(b) (2)	(c)	2
4 2	5 3		6 4
\times 2 1	\times 1 8		× 1 5
4 2	4 2 4		3 2 0
+ 8 4 0	+ 5 3 0		+ 6 4 0
8 8 2	9 5 4		9 6 0

2. Find the product :

(a)	1	1		(b)		4	3		(c)		0	1	
	2	7	8			5	8	7			9	1	3
	×	2	0			×	1	5			×	3	6
	0	0	0	-	2	9	3	5		5	4	7	8
+ 5	5	6	0	+	5	8	7	0	+_	2 7	3	9	0
5	5	6	0		8	8	0	5	_	3 2	8	6	8
	-	-							-		1	0	
(d)													~
(d)	(3)	(3)		(e)		C) ()	(f)		5	5	0
(u)	(3) 2	9	8	(e)		5) 1	(1)		5 ×	5 2	0 3
(u)	~	9 1	4	(e)		X	1) 1 9	(1)	1			
(u) 1	2 ×	9 1		(e)	4	×	1	9	(1)	1	×	2	3
_	2 × 1	9 1 9	4	(e) +	4	×	1	9	(1)		×	2 5	<u>3</u> 0
1	2 × 1 2 9	9 1 9 8	<u>4</u> 2			× 5	1 9	9 9	(1)	- <u>11</u>	× 6 0	2 5 0	3 0 0



Solve the following word problems :

1.	Seats in a bus	= 82
	So, the seats in 16 such buses	$= 82 \times 16$
		=1312 Ans.

\bigcirc	1	
	8	2
×	1	6
4	9	2
+ 8	2	0
13	1	2



2. Eggs one hen lays in a month = 14Eggs laid by 352 hens in a month $= 352 \times 14$ = 4928

Ans.

		2	0	
		3	5	2
		\times	1	4
	1	4	0	8
+	3	5	2	0
	4	9	2	8

3. Pen in a packet = 24 So, the pen in 95 such packets = 95×25 = 2280 Ans.

			(1)	(2)
			9	5
		×	2	4
		3	8	0
+	1	9	0	0
	2	2	8	0
_				

4. Juice cans in a carton = 142So, the juice cans in 27 such cartons $= 142 \times 27$ = 3834 Ans.

		2	1	
		1	4	2
		\times	2	7
		9	9	4
+	2	8	4	0
	3	8	3	4

5. Balloons in a packet = 32So, the balloons in 215 such packets $= 215 \times 32$ = 6880. Ans

		0	$\frac{1}{2}$	
		$\overline{2}$	ī	5
		\times	3	2
		4	3	0
+	6	4	5	0
	6	8	8	0

- 6. Cost of a bag = `s256 So, the cost of 35 such bags 256×35 = = ` 8960 Ans. 3 2 (3) 5 6 \times 3 5 2 1 8 0 +7 6 8 0 8 9 6 0
- 7. Bat made by factory in a day = 307January has 31 days. = 307×31 So, the bats made by the factory in the month of January 9517 Ans. $\bigcirc (2)$ $3 \ 0 \ 7$

$$\begin{array}{r} \times & 3 & 1 \\
 3 & 0 & 7 \\
 + 9 & 2 & 1 & 0 \\
 9 & 5 & 1 & 7
 \end{array}$$

8. Students sent by each school = 24 So, the students sent by 125 school = 125×24 = 3000 Ans.

		2	
	1	2	5
	\times	2	4
	5	0	0
+ 2	5	0	0
3	0	0	0

9. Flowers in each garland

So, the flowers in 313 such garlands

				U	
			1	1	
			3	1	3
			\times	4	2
			6	2	6
+	1	2	5	2	0
	1	3	1	4	6

 $=313 \times 42$ = 13146 **Ans.**

=42

10. Cost of a shirt = `285 So, the cost of 37 such shirts = `285 × 37 $\frac{2}{2}$ = `10545 Ans.

	5	3	
	$\tilde{2}$	8	5
	\times	3	7
1	9	9	5
+ 8	5	5	0
10	5	4	5

1. Find the product :

13

	(a)	$6 \times 9 = 54$		(b) 7 × 7	= 49	
	(c)	$4 \times 9 = 36$		(d) 10 ×	8 = 80	
	(e)	$8 \times 9 = 72$		(f) 8 × 8	= 64	
	(g)	$8 \times 6 = 48$		(h) 10×	10 = 10	0
	(i)	$5 \times 9 = 45$		(j) 9 × 4	= 36	
	(k)	$6 \times 9 = 54$		(<i>l</i>) 3×9	= 27	
2.	Fill	in the blanks	:			
	(a)	358	(b)	0	(c)	99
	(d)	1	(e)	10	(f)	2700
	(g)	1200	(h)	100	(i)	9

3. Multiply the following numbers :

(a) $\bigcirc \begin{array}{c} 1\\ \hline 3\\ 2 & 1 & 6 \end{array}$	(b) $\begin{array}{c}1\\2\\2&5\\1\end{array}$	(c) $\begin{pmatrix} 4\\ 1\\ 2 & 9 \end{pmatrix}$
× 3 6	× 3 4	× 5 2
1 2 9 6	1 0 0 4	5 8
+ 6 4 8 0	+ 7 5 3 0	+1450
7776	8 5 3 4	1 5 0 8
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	(e) $\begin{pmatrix} 2\\ 2\\ 3\\ 7\\ \hline \\ \\ \hline \\ \\ \hline \\ \\ 1\\ 1\\ 1\\ 1\\ \hline \\ \\ \hline \\ \\ 1\\ \\ \hline \\ \\ \hline \\ \\ 1\\ \\ \\ \\ $	(f) $\begin{pmatrix} 2 \\ 7 \\ 6 \\ \hline & 7 \\ 6 \\ \hline & 8 \\ \hline & 6 \\ 0 \\ 8 \\ \hline & 1 \\ 3 \\ 6 \\ 8 \\ \hline & 1 \\ 3 \\ 6 \\ 8 \\ \hline & 8 \\ \hline & 1 \\ 3 \\ 6 \\ 8 \\ \hline & 8 \\ \hline & 1 \\ 1 \\ 3 \\ 6 \\ 8 \\ \hline & 1 \\ 1 \\ 1 \\ 3 \\ 6 \\ 8 \\ \hline & 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1$

- = 1179 **Ans.** (2)()3 1 9 117 9
- (d) 1 school sent in dance competition = 100 students 98 school sent in dance competition = 100×98 = 9800 Students Ans.



Exercise 6.1

- 1. Fill in the blanks :
 - (a) $15 \div 5 = 3$ dividend 15, divisor 5, quotient 3
 - (b) $18 \div 3 = 6$ dividend 18, divisor 3, quotient 6
 - (c) $12 \div 6 = 2$ dividend 12, divisor 6, quotient 2
 - (d) $16 \div 4 = 4$ dividend 16, divisor 4, quotient 4
- 2. Draw 21 beads. Put them equally in 3 threads. $21 \div 3 = 7$ we will put 7 beads in each thread.



1. Remove 2 laddoos repeatedly from each plate and put them in bags. How many bags will you pack with the ladoos?

(a)
$$14 \div 2 = 7$$
 (b) $18 \div 2 = 9$ (c) $22 \div 2 = 11$

2. Write repeated subtraction for division facts :

- (a) 8-4=4, 4-4=0; or $8 \div 4=2$.
- (b) 21 3 = 18, 18 3 = 15, 15 3 = 12, 12 3 = 9, 9 3 = 123 = 6, 6 - 3 = 3, 3 - 3 = 0; or $21 \div 3 = 7$.
- (c) 25-5=20, 20-5=15, 15-5=10, 10-5=, 5-5 $= 0; \text{ or } 25 \div 5 = 5.$
- 3. Find how many times 4 can be taken away from 24. 24 - 4 = 20, 20 - 4 = 16, 16 - 4 = 12, 12 - 4 = 8, 8 - 4 = $4, 4 - 4 = 0; \text{ or } 24 \div 4 = 6.$ So 4 can be taken away 6 times from 24.
- 4. How many 8s are there in 48?

3

4

0

4	8		
_	8	→	1
4	~		
_	8	→	2
3			
	8	→	3
2	4		
_	8	→	4
1	6		
_	8	→	5
	8		
_	8	→	6
	0		

So there are six 8s in 48.

5. 54 flowers have to be arranged in 6 flower pots. Find the number of flowers in each pot.

· · ·			cucii
	5	4	
	_	6	→ 1
	4	8	-
	_	<u>6</u> 2	$\rightarrow 2$
	4	2	
		6 6	→ 3
	_	6 0	. → 4
	3	0	
	_	<u>6</u> 4	. → 5
	_	6	→ 6
	1	8	
	_	6 2	→ 7
	1	2	
	_	6 6	→ 8
		$\frac{6}{0}$	→ 9
		0	

So, there are 9 flowers in each pot. or $54 \div 6 = 9$.



1. Write division facts for multiplication facts :

- (a) $30 \div 6 = 5, 30 \div 5 = 6$ (b) $32 \div 4 = 8, 32 \div 8 = 4$ (d) $49 \div 7 = 7$ (c) $27 \div 9 = 3, 27 \div 3 = 9$
- (e) $54 \div 6 = 9, 54 \div 9 = 6$ (f) $48 \div 8 = 6, 48 \div 6 = 8$
- 2. Write multiplication facts for division facts : (a) $7 \times 2 = 14$ (b) $10 \times 2 = 20$ (c) $4 \times 3 = 12$,
- (d) $4 \times 4 = 16$ (e) $5 \times 5 = 25$ (f) $6 \times 7 = 42$,
- 3. Use Multiplication tables to find division facts : (a) $1 \times 3 = 3, 2 \times 3 = 6, 3 \times 3 = 9, 3 \times 4 = 12, 3 \times 5 = 15$ so, $15 \div 3 = 5$



- (b) $1 \times 2 = 2, 2 \times 2 = 4, 3 \times 2 = 6, 4 \times 2 = 8, 5 \times 2 = 10, 6 \times 2 = 12, 7 \times 2 = 14, 8 \times 2 = 16, 9 \times 2 = 18, 10 \times 2 = 20; so, 20 \div 2 = 10.$
- (c) $1 \times 9 = 9, 2 \times 9 = 18$; so, $18 \div 9 = 2$.
- (d) $1 \times 7 = 7, 2 \times 7 = 14, 3 \times 7 = 21$; so, $21 \div 7 = 3$.
- (e) $1 \times 4 = 4, 2 \times 4 = 8, 3 \times 4 = 12, 4 \times 4 = 16, 5 \times 4$ = 20, 6 × 4 = 24, 7 × 4 = 28, 8 × 4 = 32, 9 × 4 = 36; so, 36 ÷ 4 = 9.
- (f) $1 \times 8 = 8, 2 \times 8 = 16, 3 \times 8 = 24, 4 \times 8 = 32, 5 \times 8$ = 40, 6 × 8 = 48, 7 × 8 = 56, 8 × 8 = 64, 9 × 8 = 72; so, 72 ÷ 9 = 8.
- (g) $1 \times 9 = 9, 2 \times 9 = 18, 3 \times 9 = 27, 4 \times 9 = 36, 5 \times 9$ = 45, $6 \times 9 = 54, 7 \times 9 = 63, 8 \times 9 = 72, 9 \times 9 = 81;$ so, $81 \div 9 = 9$.
- (h) $1 \times 4 = 4, 2 \times 4 = 8, 3 \times 4 = 16, 4 \times 4 = 12, 5 \times 4$ = 20, 6 × 4 = 24, 7 × 4 = 28; so, 28 ÷ 4 = 7.
- (i) $1 \times 10 = 10, 2 \times 10 = 20, 3 \times 10 = 30, 4 \times 10 = 40, 5 \times 10 = 50, 6 \times 10 = 60, 7 \times 10 = 70, 8 \times 10 = 80, 9 \times 10 = 90$; so, $90 \div 10 = 9$.
- (j) $1 \times 8 = 8, 2 \times 8 = 16, 3 \times 8 = 24, 4 \times 8 = 32, 5 \times 8 = 40, 6 \times 8 = 48, 7 \times 8 = 56, 8 \times 8 = 64, 9 \times 8 = 72, 10 \times 8 = 80;$ so, $80 \div 8 = 10.$



- 1. Fill in the blanks :
 - (a) 8 (b) 39 (c) 14 (d) 17 (e) 14 (f) 100 (g) 1 (h) 1 (i) 1 (j) 0 (k) 0 (l) 0 (m) 7 (n) 12 (o) 1.
- 2. Write 'T' for true and 'F' for false statement : (a) F (b) F (c) T (d) T



- 1. Work out each problem :
 - (a) $1 \times 8 = 8, 2 \times 8 = 16, 3 \times 8 = 24, 4 \times 8 = 32, 5 \times 8$ = 40, 6 × 8 = 48, 7 × 8 = 56, 8 × 8 = 64; so, 64 ÷ 8 = 8.
 - (b) $1 \times 6 = 6$, $2 \times 6 = 12$, $3 \times 6 = 18$, $4 \times 6 = 24$, $5 \times 6 = 30$, $6 \times 6 = 36$, $7 \times 6 = 42$, $8 \times 6 = 48$, $9 \times 6 = 54$; so, $54 \div 6 = 9$.
 - (c) $1 \times 9 = 9, 2 \times 9 = 18, 3 \times 9 = 27, 4 \times 9 = 36, 5 \times 9$ = 45, 6 × 9 = 54, 7 × 9 = 63, 8 × 9 = 72, 9 × 9 = 81; so, 81 ÷ 9 = 9.
 - (d) $1 \times 5 = 5, 2 \times 5 = 10, 3 \times 5 = 15, 4 \times 5 = 20, 5 \times 5$ = 25, 6 × 5 = 30, 7 × 5 = 35, 8 × 5 = 40, 9 × 5 = 45, $10 \times 5 = 50$; so, $50 \div 5 = 10$.
 - (e) $0 \div 27 = 0$ (because 0 divided by any number gives 0.)
 - (f) $1 \times 8 = 8, 2 \times 8 = 16, 3 \times 8 = 24, 4 \times 8 = 32, 5 \times 8 = 40, 6 \times 8 = 48, 7 \times 8 = 56;$ so, $56 \div 8 = 7.$
 - (g) $1 \times 9 = 9$, $2 \times 9 = 18$, $3 \times 9 = 27$, $4 \times 9 = 36$, $5 \times 9 = 45$, $6 \times 9 = 54$; so, $54 \div 9 = 6$.
 - (h) $1 \times 7 = 7, 2 \times 7 = 14, 3 \times 7 = 21, 4 \times 7 = 28, 5 \times 7$ = 35, 6 × 7 = 42, 7 × 7 = 49; so, 49 ÷ 7 = 7.
- 2. Write 'T' for true and 'F' for false and also write the correct answers in the boxes if false :

(b)	Т	(c) F, 10	(d) T	(e) F, 9
(0)			$(1) \mathbf{\Gamma} \mathbf{C}$	(') T

- (f) F, 6 (g) F, 5 (h) F, 6 (i) T
- (j) T (k) F, 20 (l) F, 7.

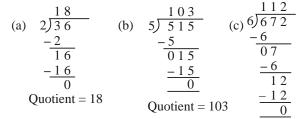
3. Insert the missing digits.

- (a) $6 \times 6 = 36$, so the missing digit is 6.
- (b) $9 \times 9 = 81$, so the missing digit is 8.
- (c) $1 \times 6 = 6, 2 \times 6 = 12, 3 \times 6 = 18, 4 \times 6 = 24, 5 \times 6 = 30, 6 \times 6 = 36, 7 \times 6 = 42$; so the missing digit is 7.

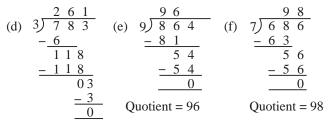
4. Insert the missing digits :

- (a) $10 \div 5 = 2$; so we will put 2 leaves in each group.
- (b) $18 \div 6 = 3$; so there are 3 packets.
- (c) $8 \div 2 = 4$; so there are 4 rats in each group.

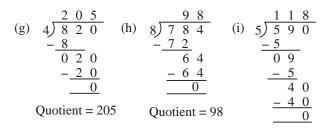
Solve the following by long division :



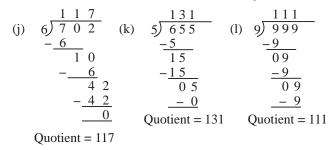
Quotient = 112



Quotient = 261



Quotient = 118



See the picture and complete the following :

(a) There are 7 ducks, $7 \div 2$ 3 groups and **1** is the remainder. $2\sqrt{\frac{3}{7}}$ -6



(b) There are 14 frogs so, $14 \div 5$ 2 groups and 4 is the remainder.

$$5) 14 -10$$

(c) There are 11 butterflies. so, $11 \div 3$ 3 groups and 2 is the remainder.

$$3) 11 \\ -9 \\ 2$$

1. Divide and check the division. Find the quotient and rei

(g)
$$5\overline{\smash{\big)}} \frac{165}{829}$$
 Q=165, R=4
 $-\frac{5}{32}$ 829 = (165 × 5) = 4
 -30 = 825 + 4 = 829
 29 So, division is correct.
(h) $8\overline{\smash{\big)}} \frac{785}{785}$ Q=98, R=8
 -72 65 = (98 × 8) + 1
 $=784 + 1 = 785$
So, division is correct.

2. Divide and check the division. Find the quotient and remainder :

__1_

. Divi emaind		he division. Find the quotient and			258	
(a)	$\begin{array}{c} 1 \\ 4 \\ 4 \\ 4 \\ 6 \\ -4 \\ 0 \\ 6 \\ -4 \\ 2 \\ 7 \\ 2 \\ 4 \\ 3 \end{array}$	Quotient = 116, Remainder = 3 Checking : Dividend = (Quotient × Divisor) + Remainder $467 = (116 \times 4) + 3$ = 464 + 3 = 467. So, division is correct.		(a)	$ \begin{array}{r} 258 \\ 4) 1035 \\ -8 \\ 23 \\ -20 \\ 35 \\ -32 \\ 3 \end{array} $	Q = 285, R = 3 1035 = $(258 \times 4) + 3$ = 1032 + 3 = 1035 So, division is correct.
(b)	5) 5 4 4 -5 0 4 4 -4 0 4 -4 0 4 -4 0 4 -5 -5 -5 -5 -5 -5 -5 -5 -5 -5 -5 -5 -5 -	Q = 108, R = 4 $544 = (108 \times 5) + 4$ = $540 + 4 = 544$. So, division is correct.		(b)	$ \begin{array}{r} 2564 \\ 3) 7693 \\ \underline{-6} \\ 16 \\ -15 \\ 19 \\ -18 \\ 13 \\ 13 $	Q = 2564, R= 1 7693 = $(2564 \times 3) + 1$ = 7692 + 1 = 7693 So, division is correct.
(c)	$3) \overline{\begin{array}{c} 226 \\ 679 \\ -6 \\ 07 \\ -6 \\ 19 \\ -18 \\ 1 \\ 1 \\ \end{array}}$	Q = 226, R = 1 $679 = (226 \times 3) + 1$ = 678 + 1 = 679 So, division is correct.		(c)	$ \frac{12}{1} $ $ \frac{1167}{9342} $ $ \frac{-8}{13} $ $ \frac{-8}{54} $ $ \frac{-48}{62} $	Q = 1167, R = 6 9342 = $(1167 \times 8) + 6$ = 9336 + 6 = 9342 So, division is correct.
(d)	$ \begin{array}{r} 130 \\ 6) 785 \\ -6 \\ 18 \\ -18 \\ 05 \end{array} $	Q = 130, R=5 785 = $(130 \times 6) + 5$ = 780 + 5 = 785 So, division is correct.		(d)		Q = 1607, R = 1 $8036 = (1607 \times 5) = 1$
(e)	$ \begin{array}{r} 95 \\ 7 \overline{\smash{\big)}\ 668} \\ -63 \\ \overline{\ 38} \\ -35 \\ \overline{\ 3} \end{array} $	Q=95, R=3 $668 = (95 \times 7) + 3$ = 665 + 3 = 668 So, division is correct.			$\begin{array}{r} -5 \\ 30 \\ -30 \\ 036 \\ -35 \\ 1 \\ 378 \end{array}$	$8036 = (1007 \times 3) = 1$ = $8035 + 1 = 8036$ So, division is correct.
(f)	56 8) 451 -40 51 <u>-48</u> <u>3</u>	Q=56, R=3 451 = $(56 \times 8) + 3$ = 448 + 3 = 451 So, division is correct.	16	(e)	$ \begin{array}{r} 378 \\ 9 \overline{\smash{\big)}\ 3405} \\ \underline{-27} \\ 70 \\ -\underline{63} \\ 75 \\ -\underline{72} \\ \underline{3} \\ \end{array} $	Q = 378, R = 3 $3405 = (378 \times 9) = 3$ = 3402 + 3 = 3405 So, division is correct.



	(f)	$ \begin{array}{r} 979 \\ \underline{-54} \\ 47 \\ \underline{-42} \\ 56 \\ \underline{-54} \\ 2 \end{array} $	Q=979, R=2 5876=(979×6)+2 =5874+2=5876 So, division is correct.	(g)	$ \begin{array}{r} $	Q = 486, R = 1 $1459 = (486 \times 3) + 1$ = 1458 + 1 = 1459 So, division is correct.
	(g)	$ \begin{array}{r} 1367 \\ 6)8203 \\ -6 \\ 22 \\ -18 \\ 40 \\ \underline{36} \\ 43 \\ -42 \\ 1 \end{array} $	Q = 1367, R = 1 $8203 = (1367 \times 6) + 1$ = 8202 + 1 = 8203 So, division is correct.	(h)	$ \begin{array}{r} 1562\\ -4 \\ -20\\ -20\\ -24\\ -24\\ -8\\ 08\\ -8\\ 0 \end{array} $	Q = 1562, R = 0 6248 = $(1562 \times 4) + 0$ = 6248 + 0 = 6248 So, division is correct.
3.	(h) Solve	980 8) 7843 -72 64 -64 03 and check your and	Q = 980, R = 3 7843= (980 \times 8) + 3 = 7840 + 3 = 7843 So, division is correct.	(k)	$7 \underbrace{) \begin{array}{c} 1 \ 2 \ 1 \ 0}_{8 \ 4 \ 7 \ 2} \\ - \underbrace{7}_{14} \\ - \underbrace{1 \ 4}_{0 \ 7} \\ \underbrace{-7}_{0 \ 2} \\ \end{array}}$	Q = 1210, R = 2 8472 = $(1210 \times 7) + 2$ = 8470 + 2 = 8472 So, division is correct.
	(a)	$2 \overline{\smash{\big)}} \begin{array}{c} 3 \\ 2 \\ \overline{} \\ 6 \\ -6 \\ 0 \\ 4 \\ \underline{-4} \\ 0 \\ 0 \\ 2 \\ 1 \\ \end{array}$	Q = 32, R = 0 $64 = (32 \times 2) + 0$ = 64 + 0 = 64 So, division is correct.	(j)	$7 \overline{\smash{\big)}^{7} \begin{array}{c} 1 \ 0 \ 0 \\ 7 \ 0 \ 4 \\ - \frac{7}{00 \ 4} \\ \hline 00 \ 4 \\ \end{array}}$	Q = 100, R = 4 704 = $(100 \times 7) + 4$ = 700 + 4 = 704 So, division is correct.
	(b)	$4 \overline{\smash{\big)}\ 84} \\ -\underline{8} \\ 04 \\ \underline{-4} \\ 0 \\ 10 \\ 10 \\ 10 \\ 10 \\ 10 \\ 10 \\ 10$	Q = 21, R = 0 84 = $(21 \times 4) + 0$ = $84 + 0 = 84$ So, division is correct.	(k)	310 $8) 2486$ -24 8 -24 -8 -8 -8	Q = 310, R = 6 2486 = $(310 \times 8) + 6$ = 2480 + 6 = 2486.
	(c)	$5) \overline{53} - 5 - 5 - 0 - 0$	Q = 10, R=3 53 = $(10 \times 5) + 3$ = $50 + 3 = 53$ So, division is correct.	(1)	$5) \frac{1098}{5492} \\ -5 \\ -5 \\ 049$	So, division is correct. Q = 1098, R = 2 $5492 = (1098 \times 5) + 2$
	(d)	$4) \overline{\begin{array}{c} 7 \ 0 \\ 2 \ 8 \ 2 \\ -2 \ 8 \\ 0 \ 2 \\ \end{array}}$	Q = 70, R=2 $282 = (70 \times 4) + 2$ = 280 + 2 = 282 So, division is correct.		$-\frac{45}{42}$ $-\frac{40}{2}$	=5490 + 2 = 5492 So, division is correct.
	(e)	$ \begin{array}{r} 90 \\ 8 \overline{\smash{\big)}} 720 \\ -72 \\ 00 \\ \end{array} $	Q = 90, R = 0 $720 = (90 \times 8) + 0$ = 720 + 0 = 720 So, division is correct.	Divide the	following number	
	(f)	$5) \overline{\begin{array}{c} 652 \\ -5 \\ 15 \\ -15 \\ 02 \end{array}}$	Q=130, R=2 $652 = (130 \times 5) + 2$ = 650 + 2 = 652 So, division is correct.	(a)	$ \begin{array}{r} 53 \\ -50 \\ -50 \\ -36 \\ -30 \\ -30 \\ -6 \\ Q = 53, R = 6 \end{array} $	(b) $10 \overline{\smash{\big)}\ 303} - \frac{30}{03}$ Q = 30, R = 3



(c)
$$10) \overline{4636}$$

 -40
 63
 -60
 $Q = 463, R = 6$
(d) $10) \overline{800}$
 -80
 00
 $Q = 80, R = 0$

Solve the following problems :

Glasses to pack = 84, Number of boxes = 7.
 So, Number of glasses to be packed in each box is 84 ÷ 7.
 12 Glass in each box. Ans.

 Number of players = 39, Number of teams = 5 So, number. of players in each team is 39 ÷ 5.
 9 players in each team, 4 players are left. Ans.

$$5) 39 - 35 - 4$$

3. Number of pencils = 5573, number of pencils in each bundle = 8.

So, number of bundles is $5573 \div 8$. **Ans.** 696 Bundles 5 pencils are left.

$$\begin{array}{r}
 \underline{696} \\
 \underline{8} \\
 5573 \\
 -\underline{48} \\
 77 \\
 -\underline{72} \\
 53 \\
 -\underline{48} \\
 \underline{5} \\
 \end{array}$$

4. Pieces of sweets = 981. Each child gets 9 pieces.

So, number of children is $981 \div 9$. 109 children. Ans.

$$\begin{array}{r}
109 \\
9 \overline{\smash{\big)}981} \\
-9 \\
081 \\
-81 \\
0
\end{array}$$

5. Number of books = 249, Number of shelves = 6 So, number of books in each shelf is $249 \div 6$. 41 books in each shelf, 3 books are left. **Ans.** $6\sqrt{249}$

- 1. Write repeated subtraction for division factors :
 - (a) 99-9=90, 90-9=81, 81-9=81-9=72, 72-9=63, 63-9=54, 54-9=45, 45-9=36, 36-9=27, 27-9=18, 18-9=9, 9-9=0.So, $99 \div 9=11.$
 - (b) 28 7 = 21, 21 7 = 14, 14 7 = 7, 7 7 = 0.So, $28 \div 7 = 4.$
 - (c) 24-3=21, 21-3=18, 18-3=15, 15-312,
 - 12-3=9, 9-3=6, 6-3=3, 3-3=0. So, $24 \div 3=8$. (d) 18-3=15, 15-3=12, 12-3=9, 9-3=6, 6-3=3, 3-3=0. So $18 \div 3=6$.
 - (e) 12-2=10, 10-2=8, 8-2=6, 6-2=4, 4-2=2, 2-2=0; so, $12 \div 2=6.$
 - (f) 48-8=40, 40-8=32, 32-8=24, 24-8=16, 16-8=8, 8-8=0; so, $48\div 8=6.$
- 2. Fill in the blanks :
- (a) 88 (b) 37 (c) 12 (d) 49 (e) 13 (f) 7 (g) 0 (h) 0 (i) 0.
- 3. Solve using long division method :

(a)
$$42 \div 4$$
 $4\sqrt{\frac{10}{42}}$
 $-\frac{4}{02}$
 $Q = 10, R = 2$
(b) $76 \div 8$ $8\sqrt{\frac{9}{76}}$
 $-\frac{72}{-4}$
 $Q = 9, R = 4$
(c) $496 \div 9$ $9\sqrt{\frac{496}{496}}$
 $q = 55, R = 1$
(d) $102 \div 3$ $3\sqrt{\frac{102}{102}}$
 $-\frac{45}{46}$
 $-\frac{45}{46}$
 $-\frac{12}{-0}$
 $Q = 34, R = 0$
(e) $253 \div 6$ $6\sqrt{\frac{22}{253}}$
 $q = 42, R = 1$
(f) $5318 \div 5$ $5\sqrt{\frac{1063}{5318}}$
 $-\frac{24}{13}$
 $-\frac{12}{-12}$
 $-\frac{30}{18}$
 $Q = 1063, R = 3$
(g) $4801 \div 7$ $7\sqrt{\frac{685}{4801}}$
 $-\frac{42}{60}$
 $Q = 802, R = 1$
 $Q = 802, R = 1$
 $Q = 802, R = 1$
 $Q = 802, R = 1$

4. Divide and check your answer :

(a) $67 \div 3$ $3 \xrightarrow{67}$ -6 -6 1 22, R = 1 Dividend = (Quotient × Divisor) + Remainder $67 = (22 \times 3) + 1$ = 66 + 1 = 67So, answers is correct.

(b)
$$728 \div 9$$
 $9 \underbrace{) \begin{array}{c} 80 \\ 728 \\ -72 \\ 08 \end{array}} \begin{array}{c} Q = 80, R = 8 \\ 728 = (80 \times 9) + 8 \\ = 720 + 8 = 728 \\ \text{So, answer is correct} \end{array}$

(c)
$$385 \div 4$$
 $4 \xrightarrow{96} 385$ $Q = 96, R = 1$
 $-36 \\ 25 \\ -24 \\ -24 \\ So, answer is correct.$

(d)
$$2273 \div 7$$
 7) 2273 Q = 324, R= 5
 -21 $2273 = (324 \times 7) + 5$
 17 = 2268 + 5 = 2273
 -14 So, answer is correct.
 -28 5

- 5. Without dividing, write the quotient and remainder :
 - (a) Q = 4, R = 7 (b) Q = 54, R = 7
 - (c) Q = 80, R = 0 (d) Q = 45, R = 9.
- 6. Solve the following problems :
 - (a) Number of passengers = 49, Number of vans = 7 So, the number of passengers in one van is $49 \div 7$.

 $7 \xrightarrow{7} 49 \\ -49 \\ 0 \end{array}$ 7 passengers in one van. **Ans.**

12 envelopes in each bag 7,

4 envelopes are left. Ans.

(b) Number of envelopes = 76, Number of bags = 6. So, the numbers of envelopes in each bag is $76 \div 9$.

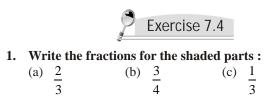


(c) Number of litchis = 435, Number of bunches = 9 So, the numbers of litchis in each bunch is $435 \div 9$.

48	48 litchis in each bunch,
9) 435	3 litchis are left. Ans.
-36	
75	
<u>-72</u>	
3	

7 Fractions

Exercises. 7.1, 7.2, 7.3 : Do yourself.



(d) $\frac{2}{3}$ (e) $\frac{3}{6}$ or $\frac{1}{2}$ (f) $\frac{2}{4}$ or $\frac{1}{2}$

(g)
$$\frac{1}{4}$$
 (h) $\frac{1}{2}$

2. Tick (\checkmark) the shapes where $\frac{1}{2}$ part is shaded :

(e) 🖌

(b) \checkmark (c) \checkmark (g) \checkmark (h) \checkmark Tick (\checkmark) the shapes where $\frac{1}{2}$ part

- 3. Tick (\checkmark) the shapes where $\frac{1}{4}$ part is shaded : (a) \checkmark (c) \checkmark (d) \checkmark (e) \checkmark (g) \checkmark
- 4. Write what fraction of the whole is unshaded :

(a)
$$\frac{5}{6}$$
 (b) $\frac{3}{6}$ or $\frac{1}{4}$ (c) $\frac{3}{8}$
(d) $\frac{4}{8}$ or $\frac{1}{2}$ (e) $\frac{3}{5}$ (f) $\frac{5}{7}$

- 5. Do yourself.
- 6. Write the fractions in figures :
 - (a) Half $= \frac{1}{2}$ (b) quarter $= \frac{1}{4}$ 3 1

(c) three-fourth =
$$\frac{1}{4}$$
 (d) one-sixth = $\frac{1}{6}$

(e) two-fifth
$$=\frac{2}{5}$$
 (f) five-eighth $=\frac{3}{8}$
7 7

(g) seven-tenth
$$=\frac{7}{10}$$
 (h) seven by nine $=\frac{7}{9}$
3

(i) three by ten
$$=\frac{3}{10}$$

7. Write in words :

- (a) $\frac{1}{3}$ = one by three (b) $\frac{2}{9}$ = two by nine
- (c) $\frac{3}{7}$ = three by seven (d) $\frac{3}{8}$ = three by eight (e) $\frac{9}{12}$ = nine by twelve (f) $\frac{5}{7}$ = five by seven (g) $\frac{2}{7}$ = two by seven (h) $\frac{4}{10}$ = four by ten
- (i) $\frac{2}{6}$ = two by six

8. Write the numerator and denominator of the following fractions :

(a)
$$N=1, D=3$$
 (b) $N=7, D=9$ (c) $N=2, D=5$
(d) $N=7, D=12$ (e) $N=8, D=13$
(f) $N=5, D=17$

9. Write the fraction, whose :

(a)
$$\frac{3}{5}$$
 (b) $\frac{6}{11}$ (c) $\frac{2}{13}$
(d) $\frac{3}{10}$ (e) $\frac{1}{8}$

10. Fill in the blanks :



- 1., 2., 3 : Do yourself.
- 4. What fraction of the collection is shaded :

(a)
$$\frac{4}{8}$$
 or $\frac{1}{2}$ (b) $\frac{3}{9}$ or $\frac{1}{3}$ (c)

5. Fill in the blanks :

(a)
$$\frac{1}{3}$$
 of $15 = \frac{13}{3} = 5$ (b) $\frac{1}{5}$ of $10 = 2$ (c) $\frac{1}{6}$ of $18 = 3$
(d) $\frac{1}{2}$ of $16 = 8$ (e) $\frac{1}{7}$ of $49 = 7$ (f) $\frac{1}{4}$ of $32 = 8$

10

- 6. Solve the following problems :
 - (a) Total number of apples = 9
 Apples given out of total = 5
 Thus, Numerator = 5, Denominator = 9

So, Neha gave $\frac{5}{9}$ apples to her brother from her apples.

(b) Stories the storybook contains = 15 Radha read the stories = $\frac{1}{3}$ of $15 = \frac{15}{3} = 5$

So Radha read 5 stories.

- (c) Number of monkeys = 12 Number of monkeys in the tree = $\frac{1}{4}$ of $12 = \frac{12}{4} = 3$ So, 3 monkeys are there in the tree.
- (d) Students in the class = 23

Students present on Monday = 19 or $\frac{19}{23}$ Absent students = 23 - 19 = 4 or $\frac{4}{23}$ So, the fraction of absent students is $\frac{4}{23}$.

8

Geometry

20

- **1.** Do yourself.
- 2. How many triangles are there in these figures : (a) 16 (b) 13

Exercise 8.1

1. Draw two each of the following and name them : (a) $\bullet_A \bullet_B$ (b) $\stackrel{A}{\bullet} \stackrel{B}{\bullet} \stackrel{C}{\bullet} \stackrel{D}{\bullet} \stackrel{D}{\bullet} \stackrel{D}{\bullet} \stackrel{C}{\bullet} \stackrel{D}{\bullet} \stackrel{D}{\bullet} \stackrel{D}{\bullet} \stackrel{D}{\bullet} \stackrel{C}{\bullet} \stackrel{D}{\bullet} \stackrel{D}{\bullet}$

- 2. Name the figures shown :
 - (b) Ray QN or \overline{QN} (c) Line \overline{OQ}
- 3. Name the line segments in the given figures :
 - (a) $\overline{PQ}, \overline{QR}, \overline{RP}$ (b) $\overline{AB}, \overline{BC}, \overline{CD}, \overline{DA}$
 - (c) $\overline{LM}, \overline{MN}, \overline{NK}, \overline{KL}$
- **4., 5., 6 :** Do yourself.

 Tick (✓) the open figures and cross (X) the closed figures :

(a)	\checkmark	(b)	X	(c)	\checkmark
(d)	X	(e)	\checkmark	(f)	\checkmark
(g)	X	(h)	\checkmark	(i)	X
(j)	\checkmark				

2,3: Do yourself.

Exercise 8.4

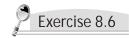
Do yourself.

1. In which pictures the shaded shapes are tile designs?

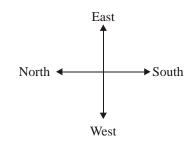
In pictures (d), (e) and (f), the shaded shapes are tile designs.

Here are some shapes. Can each of these be used to make tile design? Tick (✓) the shapes that can be used to make tile designs :

No; each of these shapes cannot be used to make tile design. Only shapes (a), (c), (d), (e) and (f) can be used to make tile designs.



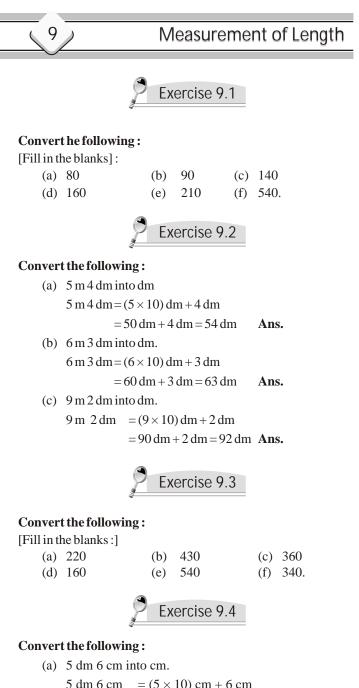
1. Write the compass points :



Tick (✓) the correct answer :

 (i) (a) ✓
 (ii) (c) ✓
 (iii) (a) ✓
 (iv) (c) ✓





$$am 6 cm = (5 \times 10) cm + 6 cm$$

= 50 cm + 6 cm = 56 cm **Ans.**

- (b) 11 dm 3 cm into cm. 11 dm 3 cm = (11×10) cm + 3 cm
 - = 110 cm + 3 cm = 113 cm Ans.

(c) 21 dm 5 cm into cm.

21 dm 5 cm = (21×10) cm + 5 cm

= 210 cm + 5 cm = 215 cm Ans.

Convert the following :

[Fill in the blanks]	:
[]	

(a)	1200	(b)	4200	(c)	3200
(d)	1400	(e)	1600	(f)	6300.

	Exercise 9.
1	

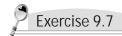
Convert the following :

(a) 8 m 73 cm into cm.
8 m 73 cm =
$$(8 \times 100)$$
 cm + 73 cm
= 800 cm + 73 cm = 873 cm Ans.

(b) 23 m 37 cm into cm. 23 m 37 cm = (23×100) cm + 37 cm

$$= 2300 \text{ cm} + 37 \text{ cm} = 2337 \text{ cm}$$
 Ans.

- (c) 19 m 4 cm into cm.
 - $19 \text{ m} 4 \text{ cm} = (19 \times 100) \text{ cm} + 4 \text{ cm}$
 - = 1900 cm + 4 cm = 1904 cm Ans.



1. Convert the following : [Fill in the blanks]: (a) 3 (b) 65 (c) 16 (f) 2 (d) 42 (e) 7 2. Convert the following : (a) 50 m into dm. (b) 66 m into dm. $50 \,\mathrm{m} = (50 \times 10) \,\mathrm{dm}$ $66 \,\mathrm{m} = (66 \times 10) \,\mathrm{dm}$ $= 500 \, \text{dm}$ Ans. $= 660 \,\mathrm{dm}\,\mathrm{Ans}.$ (c) 7 m 2 dm into dm. $7 \text{ m} 2 \text{ dm} = (7 \times 10) \text{ dm} + 2 \text{ dm}$ $= 70 \,\mathrm{dm} + 2 \,\mathrm{dm} = 72 \,\mathrm{dm} \,\mathrm{Ans.}$ (d) 13 m 6 dm into dm. $13 \text{ m} 6 \text{ dm} = (13 \times 10) \text{ dm} + 6 \text{ dm}$ $= 130 \,\mathrm{dm} + 6 \,\mathrm{dm} = 136 \,\mathrm{dm}$ Ans. (e) 6 dm into cm. (f) 49 dm into cm. $6 \,\mathrm{dm} = (6 \times 10) \,\mathrm{cm}$ $49 \, \text{dm} = (49 \times 10) \, \text{cm}$ $=490 \,\mathrm{cm} \,\mathrm{Ans.}$ $=60 \,\mathrm{cm}$ Ans. (g) 5 dm 5 cm into cm. $5 \text{ dm} 5 \text{ cm} = (5 \times 10) \text{ cm} + 5 \text{ cm}$ =50 cm + 5 cm = 55 cm Ans. (h) $13 \,\mathrm{dm}\,6 \,\mathrm{cm}\,\mathrm{into}\,\mathrm{cm}$. $13 \,\mathrm{dm}\,6 \,\mathrm{cm} = (13 \times 10) \,\mathrm{cm} + 6 \,\mathrm{cm}$ = 130 cm + 6 cm = 136 cm Ans. (i) Covert 6 m into cm (j) $26 \,\mathrm{m}\,\mathrm{into}\,\mathrm{cm}$ $6 \,\mathrm{m} = (6 \times 100) \,\mathrm{cm}$ $26 \,\mathrm{m} = (26 \times 100) \,\mathrm{cm}$ $= 600 \, \text{cm}$ Ans. $= 2600 \,\mathrm{cm}$ Ans. (k) $9 \, \text{dm} \, 36 \, \text{cm} \, \text{into} \, \text{cm}$. $9 \,\mathrm{dm}\,36 \,\mathrm{cm} = (9 \times 10) \,\mathrm{cm} + 36 \,\mathrm{cm}$ =90 cm + 36 cm = 126 cm Ans. (1) 10 m into cm. $10 \text{ m} = (10 \times 100) \text{ cm} = 1000 \text{ cm}$ Ans. (m) 300 cm into m. $=\frac{1}{100}$ m 1 cm

$$300 \,\mathrm{cm} = \frac{300}{100} \,\mathrm{m} = 3 \,\mathrm{m}$$
 Ans.

(n) 10 m 5 cm into cm.

$$10 \,\mathrm{m}\,5 \,\mathrm{cm} = (10 \times 100) \,\mathrm{cm} + 5 \,\mathrm{cm}$$

$$= 1000 \,\mathrm{cm} + 5 \,\mathrm{cm} = 1005 \,\mathrm{cm}$$
 Ans.



(o) 3400 cm into m.

$$1 \text{ cm} = \frac{1}{100} \text{ m}$$

 $3400 \,\mathrm{cm} = ---- \qquad \mathbf{Ans.}$

 $(p) \ \ 200\,cm\,into\,m.$

1 cm = ----

Ans.

(q) $1600 \,\mathrm{cm}\,\mathrm{into}\,\mathrm{m}.$

1 cm = ---

 $1600 \,\mathrm{cm} = -----$

(r) 4800 cm into m.

 $1 \,\mathrm{cm} =$ _____

 $4800 \,\mathrm{cm} =$ _____

(10)**Measurement of Mass** Exercise 10.1 **Convert the following :** Fill in the blanks : (a) 9000 13000 (c) 4000 (b) (d) 8000 (e) 6000 (f) 36000 (g) 19000 (h) 5000 (i) 21000 (j) 11000. Exercise 10.2 **Convert the following :** (a) 7 kg 361 g into g. $7 \text{ kg } 361 \text{ g} = (7 \times 1000) \text{ g} + 361 \text{ g}$ = 7000 g + 361 g = 7361 g Ans. (b) 9 kg 43 g into g. $9 \text{ kg } 43 \text{ g} = (9 \times 1000) \text{ g} + 43 \text{ g}$ = 9000 g + 43 g = 9043 g Ans. (c) 11 kg 34 g into g. $11 \text{ kg } 34 \text{ g} = (11 \times 1000) \text{ g} + 34 \text{ g}$ = 11000 g + 34 g = 11034 g Ans. (d) 18 kg 99g into g $18 \text{ kg } 99 \text{g} = (18 \times 1000) \text{g} + 99 \text{g}$ = 18000g + 99g = 18099g Ans. Exercise 10.2 (b) (c) 7 kg 1. (a) 2 kg 6kg (d) 8 kg 11 kg (f) 14 kg (e) 2. (a) 4 kg into g $4 \text{ kg} = (4 \times 1000) \text{ g}$ $= 4000 \, \mathrm{g} \, \mathrm{Ans.}$

- (b) 7 kg into g $7 \text{ kg} = (7 \times 1000) \text{ g} = 7000 \text{ g} \text{ Ans.}$
- (c) 15 kg into g 15 kg = (15×1000) g = 15000 g Ans.
 (d) 18 kg into g 18 kg = (18×1000) g = 18000 g Ans.
- (e) 7 kg 195 g into g. $7 \text{ kg } 195 \text{ g } = (7 \times 1000) \text{ g} + 195 \text{ g}$ = 7000 g + 195 g = 7195 g Ans.
- (f) 2 kg 871 g into g. $2 \text{ kg } 871 \text{ g } = (2 \times 1000) \text{ g} + 871 \text{ g}$ = 2000 g + 871 g = 2871 g Ans.
- (g) 11 kg 45 g into g. 11 kg 45 g = (11×1000) g + 45 g =11000 g + 45 g = 11045 g **Ans.**
- (h) 4 kg 36 g into g. $4 \text{ kg } 36 \text{ g} = (4 \times 1000) \text{ g} + 36 \text{ g}$ = 4000 g + 36 g = 4036 g Ans.
- (i) 3000 g into kg.
- (j) 23000 g into kg.

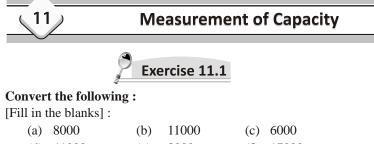
 $(k) \quad 14000 \,g\,into\,kg.$

$$14000 \,\mathrm{g} = -----$$

(l) 16000 g into kg.

1 g = _____

$$16000 \,\mathrm{g} = -----$$



(d) 41000 (e) 3000 (f) 17000.





Convert the following :

- (a) $6l \, 118 \, ml$ into ml. $6l \, 118 \, ml = (6 \times 1000) \, ml + 118 \, ml$ $= 6000 \, ml + 118 \, ml = 6118 \, ml$ Ans.
- (b) 3l426 ml into ml. $3l426 ml = (3 \times 1000) ml + 426 ml$
- $= 3000 \, ml + 426 \, ml = 3426 \, ml \text{ Ans.}$ (c) $4 \, l \, 109 \, ml \text{ into } ml$. $4 \, l \, 109 \, ml = (4 \times 1000) \, ml + 109 \, ml$
 - $= 4000 \, ml + 109 \, ml = 4109 \, ml \, \text{Ans.}$

Exercise 11.3

1. Convert the following : [Fill in the blanks]: (a) 6 (b) 12 (c) 3 (d) 7 (e) 5 (f) 31. 2. Convert the following : (a) 2 l into ml. $2 l = (2 \times 1000) ml = 2000 ml$ Ans. (b) 5 *l* into *ml*. $5 l = (5 \times 1000) ml = 5000 ml$ Ans. (c) 13 *l* into *ml*. $13 \ l = (13 \times 1000) \ ml = 13000 \ ml$ Ans. (d) 42 *l* into *ml*. $42 l = (42 \times 1000) ml = 42000 ml$ Ans. (e) 71287 ml into ml. $7 l 287 ml = (7 \times 1000) ml + 287 ml$ = 7000 ml + 287 ml = 7287 ml Ans. (f) 12 *l* 713 *ml* into *ml*. $12 \ l \ 713 \ ml = (12 \times 1000) \ ml + 713 \ ml$ = 12000 ml + 713 ml = 12713 ml Ans. (g) 10 *l* 16 *ml* into *ml*. $10 \ l \ 16 \ ml = (10 \times 1000) \ ml + 16 \ ml$ = 10000 ml + 16 ml = 10016 ml Ans.(h) 14 l 236 ml into ml. $14 \ l \ 236 \ ml = (14 \times 1000) \ ml + 236 \ ml$ = 14000 ml + 236 ml = 14236 ml Ans. (i) 4000 *ml* into *l*. $1 ml = \frac{1}{1000}l$ $4000 \ ml = \frac{4000}{1000} l = 4 \ l$ Ans.

(j) 63000 ml into l.

$$1 ml = \frac{1}{1000}l$$

$$63000 \ ml = \frac{63000}{1000} l = 63 \ l \quad \text{Ans.}$$

(k) 31000 ml into l.

$$1 ml = \frac{1}{1000} l$$
$$31000 ml = \frac{31000}{1000} l = 31 l$$

(1) 17000 ml into l.

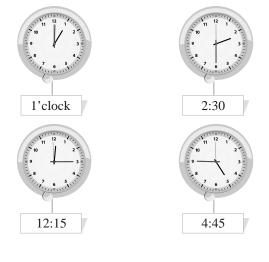
12)

$$1 ml = \frac{1}{1000}l$$

17000 ml = $\frac{17000}{1000}l = 17 l$

Exercise 12.1

- **1.** Look at the clock and read the correct time : (a) 11:00 (b) 7:30 (c) 3:15 (d) 6:45
- 2. Do raw the hands of the clock to show the given time :



Exercise 12.2

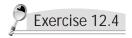
- 1. Write the time as minute past the hour or minutes to the next hour :
 - (b) 10:10 = 10 minutes past 10
 - (c) 9:25 = 25 minutes past 9
 - (d) 3:45 = 15 minutes to 4
- 2. Do yourself.

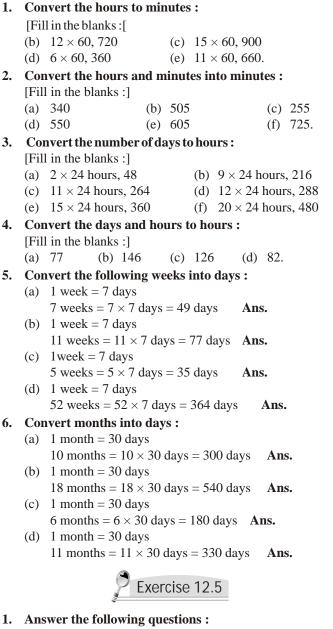
- 1. Write the time using a.m. or p.m. :
 - (a) 4:00 a.m.(b) 5:15 p.m.(c) 8:30 p.m.(d) 8:15 a.m.(e) 10:40 a.m.(f) 2:05 p.m.
 - (g) 5:50 p.m. (h) 8:45 p.m. (i) 7:15 p.m.

2. Put a tick mark (\checkmark) on the correct time :

(a) a.m. \checkmark (b) a.m. \checkmark (c) p.m. \checkmark (d) p.m. \checkmark (e) p.m. \checkmark







- (a) 12 months (b) 7 months (c) 4 months.
- 2. Look at the current year calender and answer :
 - (a) _____ days, (b) _____ weeks
 - (c) (i) Republic Day (ii) Independence Day (iii) Children Day (iv) Christmas Day.
 - (d) _____ 05 _____ .

Exercise 12.6

1. Write :

- [Fill in the blanks :]
- (a) Day before

(i) Monday	(ii) Friday	(iii) Sunday
Fill in the blanks:		
(b) Day between		

(i) Thursday (ii) Tuesday (iii) Friday

2. Fill in the table :

	Month before	Month between	Month after
(a) January	February	March
(b) May	June	July
(c) October	November	December

3. Answer the following questions :

- (a) July, August, 31 days each, (b) Yes (c) No
 - (d) After 4 years, in 2016, Pooja will celebrate her next birthday.
- 4. Write the dates in the form date/month/year :
 - (a) 08/02/2014 (b) 11/07/2010
 - (c) 04/05/2013
- 5. Pranav was born on 5th March 2010 :
 - (a) 7 years (b) 05/03/2015.



1. Write the given amount in words :

- (a) $\dot{48.90}$ = Rupees forty-eight and paise ninety.
- (b) 25.08 = Rupees twenty-five and paise eight.
- (c) 18.25 = Rupees eighteen and paise twenty-five.
- (d) 62.07 = Rupees sixty-two and paise seven.
- (e) 0.50 = Paise fifty.
- (f) 67.00 = Rupees sixty-seven.
- 2. Write the following amount in figures :

(a)	` 37.12	(b)	` 23.84	(c)	` 59.46
(d)	` 278.00	(e)	` 40.03	(f)	` 100.05

Exercise 13.2

1. Convert rupees into paise :

- (a) $7 = (7 \times 100)$ paise = 700 pasie **Ans.**
- (b) $40 = (40 \times 100)$ paise = 4000 paise **Ans.**
- (c) $8.25 = (8 \times 100)$ paise + 25 paise
- = 800 paise + 25 paise = 825 paise Ans. (d) `99.99 = (99 × 100) paise + 99 paise
- = 9900 paise + 99 paise = 9999 paise Ans.
- (e) $20.09 = (20 \times 100)$ paise + 9 paise
 - = 2000 paise + 9 paise = 2009 paise Ans.
- (f) $9.02 = (9 \times 100)$ paise + 2 paise = 900 paise + 2 paise = 902 paise **Ans.**
- 2. Convert paise into rupees :
 - (a) 600 p $1 \text{ p} = \frac{1}{100}$ $600 \text{ p} = \frac{600}{100} = 6.00 \text{ Ans.}$ (b) 1300 p $1 \text{ p} = \frac{1}{100}$ $\frac{1300}{100} = 13.00 \text{ Ans.}$

3. Subtract the following :

(a) P	(b) ` P	(c) P
846.50	976.50	487.80
-215.75	- 2 2 2 . 0 0	- 1 2 9.3 0
630.75	754.50	358.50

5)46.25(9.25

 $\frac{-10}{25} - \frac{-25}{0}$ **Answer** = `9.25

 $-\frac{45}{12}$

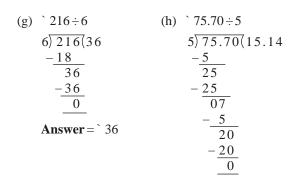
7)70.14(10.02

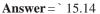
 $-\frac{7}{0.14}$

 $\frac{-14}{0}$

Answer = ` 10.02







Р

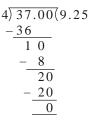


Solve the following problems :

Р 1. Cost of pen 1 0 . 0 0 = Cost of pencil 5.50 =Cost of notebook = + 2 5 . 75 Total exp. Ans. = 4 1 2 5 Nidhi spent ` 41.25. 2. Cost of vegetables . 7 5 = 1 4 5 . 5 0 Cost of fruits + 2 3 4= Total exp. = 380.25 Mother spent ` 380.25 Ans. P = 100.003. Money with me = -85.30Paid for crayons 14.70 Money left with me = ` 14.70 left with me. Ans. . 0 0 5 0 0 Sneha gave to shopkeeper 4. = -265 . 30 Cost of medicines = 234 70 Shopkeeper returned to Sneha =Shopkeeper returned to Sneha ` 234.70. Ans. Р . 2 0 5 5. Cost of 1 biscuit packet = 5 × . Cost of 5 biscuit packets = 26 . 0 0 5 biscuit packets will cost ` 26. Ans. Р Cost of 1 pen . 7 5 6. = Cost of 8 pens = × 8 78 0 0 8 pens will cost ` 78. Ans. 7. Cost of 6 boxes of orange = 180 Cost of 1 box of orange = $180 \div 6$ 6)180(30)-18 0

Cost of 1 box of orange is ` 30. Ans.

8. 4 person pay entrance free = 37So, entrance fee for one person was = $37 \div 4$



The entrance fee of the park per person was ` 9.25 Ans.



These are the prices of some items on Mr Sameer's stationary shop :

1. (a) Bill for Rita :

Sl. No.	Item	Quantity	Rate per item (`)	Cost (`)
1.	Wrapping paper	5	15.00	75.00
2.	Eraser	2	4.00	8.00
3.	Sheet of paper	10	0.50	5.00
			Total	88.00

(b) Bill for Seema :

Sl. No.	Item	Quantity	Rate per item (`)	Cost (`)
1.	Pair of scissors	1	35.00	35.00
2.	Sharpener	3	5.00	15.00
3.	Eraser	2	4.00	8.00
			Total	58.00

```
Р
2.
       Rita gave to Mr Sameer
                                 100.00
                              =
                                 - 8 8 . 0 0
               Bill for Rita
                              =
                                    1 2
        Mr. Sameer returned
                              =
                                        .
                                          0 0
```

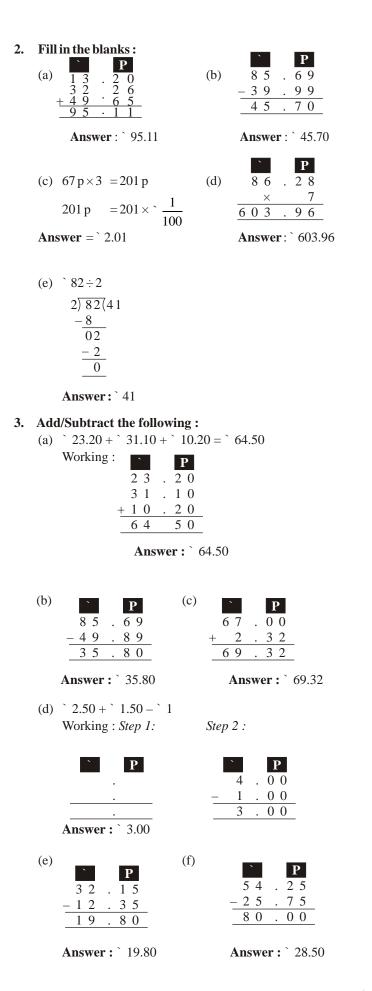
Р Seema gave to Mr. Sameer = $1 \ 0 \ 0$. $0 \ 0$ Bill for Sameer = -58 . 00 Mr Sameer returned = 42.00

So, Mr Sameer returned ` 12.00 to Rita and ` 42.00 to Seema.

Revision

1. Convert :

[Use: $1 = 100 \text{ p}; \text{p} = \frac{1}{100}$]	
(a) $8.25 = 8.25 \times 100 \mathrm{p}$	(b) $4 = 4 \times 100 \mathrm{p}$
= 825 p Ans.	=400 p Ans.
(c) $0.87 = 0.87 \times 100 \mathrm{p}$	(d) $6213 \mathrm{p} = 6213 \times 100^{-1}$
= 87 p Ans.	=`62.13 Ans.



4.	Multiply	the	following :	
----	----------	-----	-------------	--

4.	Multiply the following :	
	(a) $\begin{array}{c} & & \mathbf{P} \\ 7 & 0 & . & 1 & 5 \\ \times & & 2 \\ \hline 1 & 4 & 0 & . & 3 & 0 \end{array}$	(b) $\begin{array}{c} & \mathbf{P} \\ 1 & 1 & 8 & 5 \\ \times & 7 \\ \hline 8 & 2 & . & 9 & 5 \end{array}$
	(c) $\begin{array}{c} \bullet & \bullet \\ 4 5 & . 1 5 \\ \times & 3 \\ \hline 1 3 5 & . 4 5 \end{array}$	(d) $\begin{array}{c} & \mathbf{P} \\ 2 & 3 & . & 0 & 5 \\ \hline & \times & 5 \\ \hline 1 & 1 & 5 & . & 2 & 5 \end{array}$
5.	Divide the following : (a) $33.12 \div 8$	(b) ` 54.36 ÷ 6
	$ 8) \overline{33.12}(4.14) \\ -\underline{32} \\ 1 1 \\ -\underline{8} \\ 32 \\ -\underline{32} \\ 0 \end{array} $	$6) 54.36(9.06) \\ -54 \\ 036 \\ -36 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ $
	Answer: 4.14	
	(c) $105 p \div 3$	(d) $7000 p \div 5$
	3) 105 (35	5)7000(1400
	-9 15	$-\frac{5}{20}$
	$-\frac{15}{0}$	$-\frac{20}{000}$
	Answer: 35 p	Answer : 1400 p
	(e) `46.40÷4	(f) `256÷4
	4) 46.40(11.60	4) 256(64
	$-\frac{4}{06}$	$-24 \\ 16$
	- <u>2</u>	- <u>16</u>
	24 - 24	0
	$\frac{-24}{00}$	Answer: `64
	Answer: `11.60	
6.	Solve the following probl	ems :
	(a) Comparing the costs :	
	Cost of ball pen	Cost of gel pen
	` 19.25	` 16.75
c		0
50,	cost of ball pen is more Working :	`Р
	Cost of ball pen $=$	19.25
	Cost of gel pen =	$-\frac{16}{2}$, 75
	Difference =	2 . 5 0

Thus, the ball pen is costlier and by 2.50 Ans.

(b) Cost of 3 toffees $= 3 \times .75 \text{ p}$ $= 225 \, p$ $=225 \times \frac{1}{100}$ = R 2.25Cost of 2 packets of biscuits $=4.25 \times 2$ = R 8.50I spent = R 2.25 + = R 8.50

$$==R 10.75 Ans.$$

- . 5 0 (c) Mrs Sharma had = 1 2 5She spent = -50. 0 0 Money left with her = 75 50 . [°] 75.50 were left with Mrs. Sharma.
- (d) 9 cushion-covers cost = 81.181 cushion-cover costs = $81.18 \div 9$ Working: 9)81.18(9.02 - 81 0 18 - 18

0

(e) 6 children get =`54.36 1 child gets =`54.36÷6 So, each child gets ` 9.06. Answer Working : 6) 54.36(9.06 -54 36 36 00

(14)

Data Handing

Р



1. Put the tally marks in the blanks against the number :

Number	Tally marks	Number	Tally marks
1		6	IN I
2		7	
3		8	
4		9	NN 1111
5	TNJ	10	



Do yourself

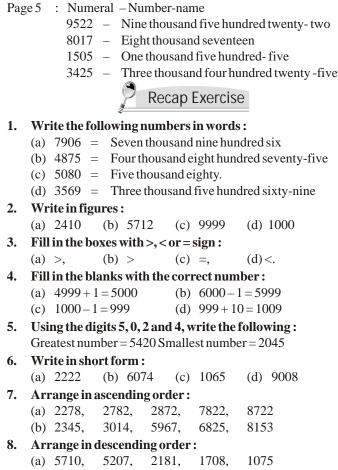


- 1. The following pictograph shows the number of comics read by four students. Each picture represents 2 books :
 - (a) Total number of books = Total number of pictures $\times 2$ $=(4+2+3+5)\times 2=14\times 2$

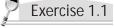
$$= 28 \text{ books Ans.}$$

- (b) Swati ($5 \times 2 = 10$ books).
- (c) Three students [Arnav ($4 \times 2 = 8$ books), Ajay $(3 \times 2 = 6 \text{ books})$, Swati $(5 \times 2 = 10 \text{ books})$]
- 2. Study the pictograph well and answer the following questions :
 - (a) Caps $(5 \times 5 = 25)$ (b) 15 girls $(5 \times 3 = 15)$
 - (c) 20 children $(4 \times 5 = 20)$

Large Numbers



(b) 4532, 2347. 4513. 1325. 1234



1. Write the following numbers in a place value chart and give the place value of the underlined digit :

Place value chart

	Number	L	T. Th	Th	Η	Т	0	Place value of
(a)	78246	-	7	8	2	4	6	2→200
(b)	29745	—	2	9	7	4	5	2→20,000
(c)	30458	_	3	0	4	5	8	0→0
(d)	694270	6	9	4	2	7	0	6→6,00,000
(e)	814271	8	1	4	2	7	1	4→4,000

- Mark the periods by placing the commas and write the 2. number names for the following :
 - (a) $76542 = 76,542 \rightarrow$ Seventy-six thousands five hundred forty-two.
 - (b) $89746 = 89,746 \rightarrow$ Eighty-nine thousand seven hundred forty-six.
 - (c) $308491 = 3,08,491 \rightarrow$ Three lakh eight thousands four hundred ninety-one.
 - (d) $217486 = 2,17,486 \rightarrow$ Two lakh seventeen thousand four hundred eighty-six.
 - (e) $568472 = 5,68,472 \rightarrow$ Five lakh sixty-eight thousand four hundred seventy-two.

3. Write the numerals for the following number-names with the help of a place value chart : rt

lace	val	hie	char
ace	va	ue	ulai

Number	L	TTh	Th	М	Т	0	Numeral
(a)	-	7	8	2	4	9	= 78,249
(b)	—	6	9	8	7	0	= 69,870
(c)	9	2	0	0	1	4	= 9,20,014
(d)	7	0	4	3	0	9	= 7,04,309

Mark the periods by placing the commas and write the 4. periods place, place value and the face value of the underlined digits.

Number	Number with period marks		Period	Place	Place value	Face value
(a) 874965	8,74,965	9	Ones	Hundreds	9×100 = 900	9
(b) 708294	7,08,294	8	Ones	Thousands	8×1000 = 8000	8
(c) 675489	6,75,489	8	Ones	Tens	8×10 = 80	8
(d) 7289456	72,89,456	8	thousands	Ten thousands	8×10000 = 80,000	8
(e) 3470961	34,70,961	4	Lakh	Lakhs	4×10000 = 40000	4
(f) 5087609	50,87,609	5	Lakhs	Tenlakhs	5×100000 = 5,00,000	5

- 5. Name the place in the thousands period : Place in the thousands period are : Ten thousands and thousands.
- 6. Name the period which comes after the thousands period.

Lakhs Period.

- Write the greatest 5-digit number in words : 7. Ninety-nine thousands nine hundred ninety-nine.
- 8. Write the smallest 7-digit number in figures by separating periods. 10,00,000
- 9. Complete the following number patterns :

(a)	76894,	76994,	77094
(b)	132359,	142359,	152359
(c)	306102,	316102,	326102
(d)	601204,	701204,	801204

- **10.** (a) $20425 \rightarrow 20426$, 20427, 20428, 20429, 20430. (b) $142417 \rightarrow 142418$, 142419, 142420, 142421, 142422.
- 11. Answer the following questions for the number 128937 :
 - (a) Place value of digit $2 = 2 \times 10,000 = 20,000$.
 - (b) Place value of digit $9 = 9 \times 100 = 900$.
 - (c) Digit whose place value is 8000 = 8.

Exercise 1.2

- 1. Write the numbers in expanded from :
 - (a) 74924 = 70000 + 4000 + 900 + 20 + 4.
 - (b) 60847 = 60000 + 800 + 40 + 7.
 - (c) 359761 = 300000 + 50000 + 9000 + 700 + 60 + 1.
 - (d) 287409 = 200000 + 80000 + 7000 + 400 + 9.
 - (f) 5028745 = 5000000 + 20,000 + 8000 + 700 + 40 + 5.
 - (g) 3908173 = 3000000 + 900000 + 8000 + 100 + 70 + 3.
- 2. Write the short form for each the following :
 - (a) = 7000000 + 80000 + 2000 + 900 + 60 + 5= 7,82,965
 - (b) = 400000 + 20000 + 900 + 80 + 3
 - = 4,20,983

- (c) = 700000 + 50000 + 9000 + 400 + 20 + 6= 7,59,426
- $\begin{array}{rcl} (d) &=& 600000 + 80000 + 400 + 90 \\ &=& 6,80,490 \end{array}$
- (e) = 78,43,967. (f) 5,09,368.

Exercise 1.3

- 1. Marks the periods and compare using <, > or = sign in the blanks :
 - (a) 70,542 < 81,964 (b) 69,745 > 69,452(c) 36,481 > 35,489 (d) 5,07,894 = 5,07,894
 - (c) 50,481 > 53,489 (d) 5,07,894 = 5,07,894(e) 6,45,427 < 7,29,684 (f) 3,49,625 > 3,29,176
 - (g) 8,96711 > 8,79454 (h) 1,45,317 < 1,54,317
 - (i) 24,41326 > 24,14362.
- 2. Arrange the following in ascending order :

(a) 42795,	50869,	69457,	72815
(b) 197546,	308426,	438795,	569541
(c) 548275,	569874,	584725,	598175
(d) 690541,	691218,	692418,	694218

3. Arrange the following in descending order :

(a)	65781,	54187,	20549,	19680
(b)	817492,	618045,	396452,	209586
(c)	287490,	278609,	247896,	247854
(d)	827904,	827490,	827409,	827049

Exercise 1.4

1. Form the smallest and greatest numerals with the following digits :

(a)	(i) Smallest = 24689 Greatest	=	98642				
	(ii) Smallest = 70789 Greatest	=	98770				
	(iii) Smallest = 10689 Greatest	=	98610				
(b)	(i) Smallest = 105689 Greatest	=	986510				
	(ii) Smallest = 123457 Greatest	=	754321				
	(iii) Smallest = 102357 Greatest	=	753210				
(c)	(i) Smallest = 1012458 Greatest	=	8542110				
	(ii) Smallest = 1034689 Greatest	=	9864310				
	(iii) Smallest = 1024789 Greatest	=	9874210				
For	rm the smallest and greatest 6-d	igit	numerals	by			
rep	eating any 2 digits :						
(a) '	7,9,5,4.						
	after repeating 2 digits = $7, 7, 9, 9, 5$,4					
Now Greatest number $= 997754$							
Smallest number $= 457799$							
(b)	3, 8, 0, 4						
	after repeating 2 digits = $3, 8, 0, 0, 4$,4					

and repeating 2 digits	_	5, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
Now, smallest number	=	300448
Greatest number	=	844300

(c) 6, 2, 9, 0

2.

3.

After repeating 2 digits = 6, 2, 2, 9, 9, 0Now, Smallest number = 202699Greatest number = 996220

		Place	value o	chart			
114	L	TTH	TH	Н	Т	0	
Priya wrote	9	9	0	0	0	0	X
Should write	9	0	9	0	0	0	1

Thus, correct numerals should be 909000.

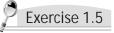
- 4. Choose any 2 digits and make : We choose digits 2 and 0. Now, numbers are :
 (a) 20000 (b) 200000 (c) 2000000
- 5. Change the position of the digits, if necessary, to get the smallest 5-digit number :

(a) 12478 (b) 50789 (c) 50089

6. Write the predecessor and successor of the following numbers :

Predecessor	Number	Successor
(729400 - 1 =)	729399	729400
(729400 + 1 =)	729401	
(680199 - 1 =)	680198	680199
(680199 + 1 =)	680200	
(205690 - 1 =)	205689	205690
(205690 + 1 =)	205691	
(789999 - 1 =)	789998	789999
(789999 + 1 =)	790000	
	$\begin{array}{l} (729400-1=)\\ (729400+1=)\\ (680199-1=)\\ (680199+1=)\\ (205690-1=)\\ (205690+1=)\\ (789999-1=)\end{array}$	$\begin{array}{ll} (729400-1=) & 729399 \\ (729400+1=) & 729401 \\ (680199-1=) & 680198 \\ (680199+1=) & 680200 \\ (205690-1=) & 205689 \\ (205690+1=) & 205691 \\ (789999-1=) & 789998 \end{array}$

- 7. (a) Successor of the greatest 6-digit number = 999999 + 1 = 1000000 Answer
 - (b) Predecessor of the smallest 5-digit number = 10000 - 1 = 9999 Answer



1. Write the number in the Indian place value chart and also write the number- name :

Number Number in Indian Place Value Chart Number-Name													
M TL TTh Th H T O													
(a)	608752		6	0	8	7	5	2	Six lakh eight				
									thousand seven				
									hundred fifty-two.				
(b)	309764		3	0	9	7	6	4	Three lakh nine				
									thousand seven				
									hundred sixty-four.				
(c)	895409		8	9	5	4	0	9	Eight lakh ninety-five				
									thousand four				
									hundred nine.				
(d)	3245768	3	2	4	5	7	6	8	Thirty-two lakh forty-				
									five thousand seven				
		_		_					hundred sixty-eight.				
(e)	5670894	5	6	1	0	8	9	4	Fifty-six lakh seventy				
									thousand eight				
									hundred ninety-four.				

2. Write the number in the International place value chart and also write the number-name :

Num	Number Number International Place Value Number-name														
		М	TL	TTh	Th	Η	Т	0							
(a)	5742561	5	7	4	2	5	6	1	Five million seven						
									hundred forty-two						
									thousand five hundred						
						_			sixty-one.						
(b)	708546		7	0	8	5	4	6	Seven hundred eight						
									thousand five hundred						
	207045					7	4	~	forty-six.						
(c)	307945		3	0	9	/	4	С	Three hundred seven						
									thousand nine						
									hundred forty-five.						



(d)	6174289	6	1	7	4	2	8	9	Six million one
									hundred seventy- four thousand two hundred
(e)	8928704	8	9	2	8	7	0		eighty-nine. Eight million nine
									hundred twenty-eight
									thousand seven
									hundred four.

3. Draw the Indian and International place value charts and write each of the following numbers in both the charts :

Numbers in Indian Place Value chart :

Numb	er Indian Pl	ace Value ch	art
NT	T - 1-1	T1	

	Number	La	kh	Thou	sands	O	ies	
		TL	L	THH	TH	Η	Т	0
(a)	75 4961		7	5	4	9	6	1
(b)	384092		3	8	4	0	9	2
(c)	618290		6	1	8	2	9	0
(d)	3450892	3	4	5	0	8	9	2
(e)	7183542	7	1	8	3	5	4	2
(f)	3654709	3	6	5	4	7	0	9
(g)	2809658	2	8	0	9	6	5	8
(h)	7184965	7	1	8	4	9	6	5

Numbers in International Place value chart :

Number International Place Value chart

	Number	N	fillio	n	The	ousa	nds		Ones	5
		HM	TM	Μ	HTM	TTH	TH	Η	Т	0
(a)	754961				7	5	4	9	6	1
(b)	384092				3	8	4	0	9	2
(c)	618290				6	1	8	2	9	0
(d)	3450892			3	4	5	0	8	9	2
(e)	7183542			7	1	8	3	5	4	2
(f)	3654709			3	6	5	4	7	0	9
(g)	2809658			2	8	0	9	6	5	8
(h)	7184965			7	1	8	4	9	6	5

4. Using the International place value chart, write the numerals for each of the following number-names, separating the periods with commas :

(d) 5,117,052 (e) 7,000,407

Exercise 1.6

- **1.** Round off the following numbers to the nearest 10: (a) 80 (b) 140 (c) 4250 (d) 76950 (e) 80480
- **2.** Round off the following numbers to the nearest 100 : (a) 27700 (b) 38400 (c) 962500 (d) 254700 (e) 8654300
- **3.** Round off the following numbers to the nearest 1000 : (a) 55000 (b) 708000 (c) 348000 (d) 620000 (e) 857000

- 4. Some numbers cannot be rounded off as in numbers with facts and time. Write 'Yes' or 'No' :
 - (a) No (b) No (c) Yes

Revision

- 1. Write the period, place, place value and face value of the underlined digits :
 - (a) In 76509, for digit $5 \rightarrow$ Period : ones, Place : Hundred, Place value : 500, Face value : 5.
 - (b) In 32476, for digit $6 \rightarrow$ Period : Ones, Place : Ones, Place value : $6 \times 1 \rightarrow 6$, Face value : 6.
 - (c) In <u>8</u>47296, for digit $8 \rightarrow$ Period : Lakh, Place : Lakh, Place value : $8 \times 100000 \rightarrow 8,00,000$, face value : 8.
 - (d) In 765894, for digit 6 → Period : Thousands, Place : Ten thousands, Place value : 6 × 10000 → 60,000 Face value : 6.
 - (e) In 24<u>78</u>096, for digit 8 → Period : Thousands,
 Place : Thousands, Place value → 8 × 1000 = 8000,
 Face value : 8.
- 2. Write the following numbers in the expanded form :
 - (a) 37465 = 30000 + 7000 + 400 + 60 + 5
 - (b) 123570 = 100000 + 20000 + 3000 + 500 + 70
 - (c) 504678 = 500000 + 4000 + 600 + 70 + 8
 - (d) 700290 = 700000 + 200 + 90
 - (e) 632807 = 600000 + 30000 + 2000 + 800 + 7
- **3. Write the following numbers in the standard form :** (a) 63275 (b) 10869 (c) 43980 (d) 207463
- 4. Write the number-names for the following in the Indian system of numeration :
 - (a) 657842 = Six lakh fifty-seven thousand eight hundred forty-two.
 - (b) 268308 = Two lakh sixty-eight thousand three hundred eight.
 - (c) 197680 = One lakh ninety-seven thousand six hundred eighty.
 - (d) 3248764 = Thirty-two lakh forty-eight thousand seven hundred sixty-four.
 - (e) Ten lakh twenty-seven thousand six hundred fifty-seven.
- 5. (a) Largest 5-digit number = 99999
 - (b) Smallest 6-digit number = 100000
 - (c) Put >, < or = sign in the boxes:
 - (i) 75496<78280 (ii) 80590<80950
 - (iii) 38764 1 = 38762 + 1
 - (Since 38764 1 = 38763 and 387662 + 138763
- 6. Write the number-names for the following in the International system of numeration :
 - (a) $472368 \rightarrow$ Four hundred seventy-two thousand three hundred sixty-eight.
 - (b) $709786 \rightarrow$ Seven hundred nine thousand seven hundred eighty-six.
 - (c) 869547 \rightarrow Eight hundred sixty-nine thousand five hundred forty-seven.
 - (d) 2890745 → Two million eight hundred ninety thousand seven hundred forty-five.
 - (e) $9726854 \rightarrow$ Nine million seven hundred twenty-six thousand eight hundred fifty-four.

⁽a) 204,601 (b) 407,812 (c) 1,204,101 (d) 5,117,052 (c) 7,000,407

- 7. Make the largest and smallest numbers with the following digits :
 - (a) $2, 6, 0, 4, 9, 5 \rightarrow \text{largest number} = 965420$, = 204569.Smallest number
 - (b) $3, 8, 7, 9, 0, 6 \rightarrow \text{largest number} = 987630$, Smallest number = 306789
- 8. Round off each of the following numbers to the nearest 10, 100 and 1000 :
 - (a) $75218 \rightarrow \text{nearest10} = 75220$, Nearest100 = 75200, Nearest1000 =75000.
 - (b) $85762 \rightarrow$ Nearest 10 = 85760, Nearest 100 = 85800, Nearest1000 = 86000.
 - (c) $34629 \rightarrow \text{Nearest} \ 10 = 34630$, Nearest 100 =34600,Nearest1000= 35000.
 - (d) 8475892→Nearest10=8475890,Nearest1008475900, Nearest 1000 = 8476000



Roman Number

2.

3.

4.

Exercise 2.1

- 1. Write the number shown by the Roman numerals :
 - (a) I=1, V=5, X=10, L=50, C=100, D=500, M=1000.
 - (b) II = 2, III = 3, XX = 20, XXX = 30, CC = 200. CD = 400, DC = 600.
 - (c) IV = 4, IX = 9, XIV = 14, XIX = 19, XXIV = 24, XXV = 25, XV = 15.
 - (d) VI = 6, VII = 7, VIII = 8, XXXII = 32, XII = 12, XIII = 13, XVI = 16, XXVII = 27.
- 2. Write using Roman numerals :

XXXVI

- (a) 4 = IV, 5 = V, 2 = II, 3 = III, 1 = I, 11 = XI, 12 = XII,16 = XVI, 14, XIV, 17 = XVII.
- (b) 8 = VIII, 6 = VI, 9 = IX, 15 = XV, 19, XIX, 20 = XX,13 = XIII, 7 = VII, 18 = XVIII, 21 = XXI.
- 3. Write 1 to 20 suing Roman numerals : XIV XV XVI XVII XVIII XIX XX

XXXVII

XXXIX

XL.

4. Write 21 to 40 using roman numerals : XXI XXII XXIII XXIV XXV XXVI XXVII XXVII XXIX XXX XXXI XXXII XXXIII XXXIV XXXV

XXXVII

(3	2)								ļ	٩dc	litio	on
1.	Ad	de	ach	oft	hefo	1	Exerc	cise 3	.1					
1.	(a)	_			H	Т	0	(b)	П	TH	TH	Н	Т	0
	(4)	-	7	7	1	5	6	(0)	-	5	4	2	1	8
		+	2	2	6	4	2		+	1	3	5	6	1
			9	9	7	9	8			6	7	7	7	9

(c)	TTH TH H T O 6 8 0 6 0 - 3 1 5 2 9	(d)	TTH TH H T O 4 2 3 6 7 + 5 3 6 1 2
	9 9 5 8 9		9 5 9 7 9
	d the sum : TTH TH H T O	(b)	ТТН ТН Н Т О
	$\bigcirc 1 1 1 1 3 5 6 8 5$		$\bigcirc 1 \bigcirc 1 \\ 6 3 4 3 9$
4	$-\frac{4}{7} \frac{1}{7} \frac{4}{1} \frac{4}{1} \frac{7}{6} \frac{5}{0}$		$+ \frac{2}{8} \frac{3}{7} \frac{8}{2} \frac{4}{2} \frac{2}{8} \frac{2}{1}$
(c)	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	(d)	\bigcirc (1) (1) (1)
4	3 1 7 9 5		+ 3 2 7 2 9
			9 7 2 1 0
Add (a)	l the following : L TTH TH H T O	(b)	L TTH TH H T O
. ,	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	-	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
(c)	L TTHTH H T O	(d)	L TTH TH H T O
	$\bigcirc \bigcirc $		$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
4	+ 5 1 6 2 1 5 2 4 2 5 8		$\begin{array}{cccccccccccccccccccccccccccccccccccc$
	9 9 8 6 9 0		$\frac{4}{4} \frac{3}{1} \frac{3}{1} \frac{3}{0} \frac{3}$
	ite each of the followin	~	olumns and add :
(a)	$\bigcirc \bigcirc $	(b)	()(1)(1)(1) 5 1 6 4 2
	$\frac{+\ 2\ 7\ 2\ 5\ 0}{9\ 9\ 5\ 6\ 8}$		$\frac{+ 5 3 6 8}{5 7 0 1 0}$
(c)		(d)	$\bigcirc \bigcirc $
(0)	7 5 6 8 5	(u)	8 4 4 7 3
			$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$
(e)	\bigcirc 111	(f)	\bigcirc 111
	$ \begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$		$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$
	17442		598113
(g)	$\bigcirc\bigcirc\bigcirc]11$	(h)	

- $\bigcirc\bigcirc\bigcirc11$ (h) (1))))(1)3 5 2 2 4 8 2 4 1 0 3 8 3 7 1 7 3 4 5 3 9 2 3 8 9 4 2 1 3 2 1 2 1 3 1 8 5 5 1
- (i) (1)(1)(1)(1)(j) (1)(1)(2)6 9 4 7 1 8 4 5 3 5 8 2 1 8 9 5 + 1 2 3 3 3 19299 0 1 3 6 4 7 1 7 9 7 7 7 6 9 9 0



- 5. Largest 5-digit number = 9 9 9 9 9 Smallest 4-digit number = + 1 0 0 0 Sum of both numbers = 1 0 0 9 9 9
- According to question, we have to add 15 thousands, 17 hundreds and 18 tens by regrouping.
 15 thousands = 1 ten thousands + 5 thousands
 - = 10.000 + 5.000
 - 17 hundreds = 1 thousands + 7 hundreds
 - =1000+700
 - 18 Tens = 10 tens + 8 tens
 - = 1 hundred + 8 tens
 - =100 + 80

Now, by adding the three numbers, 10,000 + 5000 + 1,000 + 700 + 100 + 80

= 10,000 + 6,000 + 800 + 80 = 16,880

7. Add the following numbers :

2.

(a)	1,	0	4,	0	0 2	(b)		7	1,	0	0	4
	+	5	8,	2	0 1		+	1,	0	0,	7	0	0
	1,	6	2,	2	0 3		+	2,	6	1,	4	0	9
								4,	3	3,	1	1	3
					2	Exercise	3.2						

1. Add the two number given in parts (i) and (ii) of each sum and compare the total :

sum and compare the total.	
(a) (i) 7 4 2 7 4 1	(ii) 6 4 8 1 5
$\frac{+ \ 6 \ 4 \ 8 \ 1 \ 5}{8 \ 0 \ 7 \ 5 \ 5 \ 6}$	+ 7 4 2 7 4 1
8 0 7 5 5 6	807556
comparing the total both ar	e equal.
(b) (i) 5 8 1 6 7 1	(ii) 7 3 2 3 9 8
$ \begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$
comparing the total, both a	
	(ii) 3 4 2 0 8 4
$+ 3 4 2 0 8 4 \\ \hline 6 2 6 6 4 7 \\ \hline$	$\begin{array}{r} + 2 8 4 5 6 3 \\ \hline 6 2 6 6 4 7 \end{array}$
Add the three number given i	n parts (i), (ii), (iii) and (iv)
of each sum and compare the	
(a) (i) 3 1 2 4 4	(ii) 3 1 2 4 4
+ 2 3 4 1 9	+ 4 1 6 9 5
	+ 2 3 4 1 9
$\begin{array}{r} + 4 & 1 & 6 & 9 & 5 \\ \hline 9 & 6 & 3 & 5 & 8 \end{array}$	+ 2 3 4 1 9 9 6 3 5 8
(iii) 2 3 4 1 9	(iv) 3 1 6 9 5
+ 4 1 6 9 5	+ 4 1 2 4 4
+ 3 1 2 4 4 9 6 3 5 8	+ 2 3 4 1 9 9 6 3 5 8
Comparing the total, all are	
(b) (i) 5 3 2 0 6	(ii) 5 3 2 0 6
+ 2 4 7 1 4	+ 6692
$\frac{+ \ \ 6 \ \ 6 \ \ 9 \ \ 2}{8 \ \ 4 \ \ 6 \ \ 1 \ \ 2}$	$\frac{+24714}{84612}$
<u> </u>	04012
(iii) 2 4 7 1 4	(iv) 6 6 9 2
+ 5 3 2 0 6	+53206

Comparing the total, all are same.

6 6 9 2

8 4 6 1 2

- 3. Fill in the blanks :
- (a) 0, (b) 3381, (c) 17231 (d) 3715 (e) 68313.
- 4. Write the sum :
 - (a) 63200 (b) 65420 (c) 41189 (d) 97803 (e) 71370 (f) 87238
 - (g) 268137 (h) 929847

Exercise 3.3

Solve the following word problems :

- 1. People educated up to the school level = 2, 5, 6 7 2 People educated up to the college level = + 1, 5, 2 5 6 Total = 4, 0, 9 2 8 So, the total number of educate people in that village is 40,928. Answer
- 2. Number of cars = 5, 2 6, 1 1 2 Number of trucks = + 2 0, 1 9 5 Total vehicles = 5, 4 6, 3 0 7So, the total number of vehicles on the road is 5,46,307 Answer
- 3. Students passed with distinction = $5\ 27\ 8\ 1$ Students passed with percentage more than $60\% = 7\ 5, 2\ 0\ 0$ Students passed with 40% mark = $\frac{+2\ 5, 0\ 0\ 0}{1,\ 5\ 2, 9\ 8\ 1}$ So, the total number of students who passed the exam is

So, the total number of students who passed the exam is 1,52,981 Answer

4. My dad bought A fridge = 1 9, 2 9 7 An AC = 3 6, 2 8 1 A sofa set = 4 6, 0 0 0 A dining table = +5 9, 0 0 0 Total amount = 1, 6 0, 5 7 8

Thus, the total amount of money my dad spent is 1,60,578.

5. Letter sent from Mumbai to Delhi = 2 1, 3 7 1Letters sent from Delhi to Mumbai = $\frac{+18, 936}{40, 307}$

Thus, 40,307 letters are exchanged between Mumbai and Delhi everyday.

6. In number 7,63,543,

The place value of $7 = 7 \times 1,00,000$	=	7,	0	0,	0	0	0	
The place value of $8 = 5 \times 100$	=	+			5	0	0	
Sum of both place values	=	7,	0	0,	5	0	0	
Thus, the sum of the place value o	f 7	and	5	in 7	7,6	3,5	43 i	is
7,00,500.								

Exercise 3.4

Frame a word problems for each of the following :

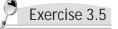
- 1. Kesar got 730 marks in Hindi and 147 marks for Maths. Tell his total mark.
- 2. Mahi got ` 839 from her mother and ` 1,678 from her father what money she has now totally?
- **3.** A fruit seller has 4,037 mangoes and 1,096 bananas. How many fruit has in all?
- 4. In a co-education school, there were 3,216 boys and 5,409 girls. How many students were there in school?
- **5.** A shopkeeper has 51,092 in his bank account. He deposited 4,059 later on. Now, how much money he has in bank account?

2 4 7 1 4

8 4 6 1 2



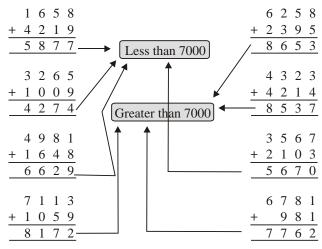
6. Mr John purchased an old car for ` 87,131 and expend ` 8,393 for its repair. Tell the total cost of car for Mr John.



1. Complete the table by writing the estimated answer and then find the actual sum :

Sl.	Add	Rounding of	Estimated	Actual
No.		number up to 10000	sum	sum
(a)	8135 + 1026	8000 + 1000	9000	9161
(b)	5321 + 2847	5000 + 3000	8000	8168
(c)	3035 + 1889	3000 + 2000	5000	4924
(d)	15225 + 23919	15000 + 24000	39000	39144
(e)	37815+31616	38000+32000	70000	69431
(f)	13814 + 27565	14000 + 28000	42000	41379

Join the problems to the estimated sum given in the 2. centre:



3. Do yourself.

Revision

1.	Write each of the following (a) 2 4 5 6 9	
	(a) 24569 + 51830	(b) 72363 + 24556
	76399	96919
	(c) $\begin{array}{r} 8 3 0 8 1 \\ + 6 5 6 3 9 \\ \hline 1 4 8 7 2 0 \end{array}$	(d) $\begin{array}{r} 3 & 2 & 5 & 3 & 4 & 3 \\ + & 4 & 5 & 2 & 6 & 4 & 8 \\ \hline 7 & 7 & 7 & 9 & 9 & 1 \end{array}$
	(e) $\begin{array}{r} 4 & 6 & 2 & 3 & 6 \\ + & 3 & 2 & 4 & 8 & 1 & 7 \\ \hline 3 & 7 & 1 & 0 & 5 & 3 \end{array}$	(f) $\begin{array}{r} 2 & 6 & 4 & 2 & 6 & 3 \\ + & 5 & 4 & 5 & 7 & 5 \\ \hline 3 & 1 & 8 & 8 & 3 & 8 \end{array}$

2. Add the numbers in (i) and (ii) of each and compare the sums:

(a)	(i)		4	3	7	1	2	(ii)		5	4	5	6	0	
		+	5	4	5	6	0		+	4	3	7	1	2	
			9	8	2	7	2			9	8	2	7	2	

Comparing the sums, both are equal.

(i)		7	1	8	9	1	(ii)		3	6	3	2	0
	+	3	6	3	2	0		+	7	1	8	9	1
	1	0	8	2	1	1		1	0	8	2	1	1

compare the sums, both are equal.

3. Find the sum of the following :

(b)

(a)

(a)	(i)	56781	(ii)	56782	(iii) 56791	(iv) 56881
(b)	(i)	643547	(ii)	643556	(iii) 643646	(iv) 644546

Estimated the sum of rounding by the numbers up to 4. 1000s and compare the sum with the actual sum also :

Estimated sum :	A	ctu	als	sun	n:
4 0 0 0		3	5	7	1
+ 4 0 0 0	+	4	3	8	5
8 0 0 0		7	9	5	6

The actual sum is 7956 which is close to the estimated sum 8000.

(b)	Estimated sum :	Actual sum :
	6000	5813
	+ 2 0 0 0	+ 1 7 6 8
	8000	7 5 8 1

The actual sum is 7581 which is not close to the estimated sum 8000.

(c) Estimated sum :	Actual sum :
$1 \ 1 \ 0 \ 0 \ 0$	1 1 0 9 3
+ 2 2 0 0 0	+ 2 2 3 6 5
3 3 0 0 0	3 3 4 5 8

The actual sum os 33458 which is not close to the estimated sum 33000.

(d) Estimated sum:	Actual sum :
7 0 0 0	6715
+ 3 0 0 0	+ 3 2 3 8
1 0 0 0 0	9953

The actual sum is 9953 which is close to the estimated sum 10000.

(e) Estimated sum :	Actual sum :
5 1 0 0 0	5 0 9 4 5
+ 6 6 0 0 0	+ 6 6 0 4 5
$1 \ 1 \ 7 \ 0 \ 0 \ 0$	116990

The actual sum is 116990 which is close to the estimated sum 117000.

(f) Estimated sum : Actual sum : 6 3 0 0 0 6 2 8 7 3 5 1 0 0 0 + 5 1 0 2 51 4 0 0 0 1 3 8 9 8 1 1

The actual sum is 113896 which is close to the estimated sum 114000.

5. Solve the following word problems using the

		=		4	Э	4	0	9	3		
(a)	Cost of the plot	= +	`	3	9	4	8	0	0		
	Cost of the building	=]	Ì	8	2	9	6	9	5	_	
	total cost										
	So, the total cost of th	e buil	ldir	ıg i	s`	82	96	95.		Ans.	
(1)	NT								~		

(b) Number of red chairs =3 1 2 5 0 Number of blue chairs = + 1 2 8 5 0 4 4 1 0 0 Total chairs =

So, 44100 chairs have been arranged in all.

(f) 9 8 7 0 0 0

$$-3 9 4 8 1 9$$

$$-5 9 2 1 8 1$$

Subtraction

6

1

1

4

Exercise 4.1 1. Subtract each of the following : (a) TTh Th H T O (b) TTh Th H Т 0 4 8 9 8 2 6 7 4 4 5 3 6 5 0 7 2 1 2 1 4 3 5 3 3 2 4 0 2 3 1 (a) TTh Th H T 0 (b) TTh Th H Т 0 4 5 8 1 4 5 7 8 6 7 5 5 3 1 2 0 6 4 4 3 3 3 1 1 3 2 1 2. Find the difference : (a) TTh Th H T 0 (b) TTh Th H T 0 (3) (12) (11)(11)(5)(12) (13) (13) () ()6 4 3 2 1 6 3 4 3 9 5 2 3 6 4 2 3 8 4 2 7 7 9 5 9 9 5 1 3 L TTh Th H T O L TTh Th H T O (d) (c) 8 17 12 11 16 (1) (16) (16) (15)2 6 9 6 7 5 9 8 3 2 6 4 1 8 4 6 6 7 5 9 4 8 7 8 3 0 8 5 0 0 8 3 8 9 4 L TTh Th H T O L TTh Th H T O (e) (f) (7) (17) (5) (9) (9) (10) (8) 13 6 9 9 10 $6 \quad \overline{0} \quad \overline{0} \quad \overline{0}$ 5 3 7 0 0 0 8 7 - 2 9 4 3 6 4 4 7 5 2 2 9 5 8 1 6 3 6 0 6 1 7 7 3. Write each of the following in columns and subtract : 5 6 7 8 9 67982 (a) (b) 3 6 5 3 0 2 4 3 2 4 3 2 4 6 5 $3\ 1\ 4\ 5\ 2$ (c) 7 3 8 6 5 (d) 596214 4 1 2 3 4 2 8 3 8 6 3 3 2 6 3 1 3 1 2 3 5 1 634090 (f) 7 5 3 1 2 4 (e) 272918 - 4 8 2 9 6 8 3 6 1 1 7 2 2 7 0 1 5 6 In each of the following write the bigger number on top and subtract smallest number from it :

According to question.

4.

(a)	97164	(b) 8 2 8 4 8
	- 6 3 2 4 5	- 7 4 5 9 1
	3 3 9 1 9	0 8 2 5 7
(c)	7 2 1 3 2	(d) 2 8 5 6 7 9
	- 5 1 0 6 0	- 1 0 3 8 6 4
	2 1 0 7 2	1 8 1 8 1 5

5. Find the difference between 14275 and 10005. According to questions, the difference is = 4270 Answer

	1	4	2	7	5	
_	1	0	0	0	5	
	0	4	2	7	0	

6. Find the difference when minuend = 25375 and subtrahend =10797.

We know, Minuend – Subtrahend = Difference

So, According to questions, the difference is = 14578Answer

Minuend 2 5 3 7 5 = Subtrahend = -107971 4 5 7 8 Difference =

806000

- 6 5 3 8 9 1 1 5 2 1 0 9

(e)

7. What number is 2879 is less than 12000?

To find the required number, we will subtract 2879 from 12000.

So, the number 9121 is 2879 less than 12000.

	12	0	0	0
_	2	8	7	9
	9	1	2	1

8. Subtract the sum of 32273 and 45600 from questions. According to question.

By adding	By subtracting,
3 2 2 7 3	1 0 0 0 0 0
+ 4 5 6 0 0	<u>- 7 7 8 7 3</u>
77873	2 2 1 2 7

So, the difference is 22127. Answer

According to questions : 9.

(a)	1	0	4,	6	8	1	(b)	8,	1	2,	9	1	6
-		4	8,	8	1	2	_	6,	0	2,	4	0	2
		5	5,	8	6	9		2,	1	0,	5	1	4

1. Fill in the blanks :

(a) 56123	(b) 87173	(c) 76422
(d) 97080	(e) 71325	(f) 38124
(g) 93813	(h) 0.	

2. For each of the following addition facts, write two subtraction facts :

~~~~					
(a)	84246	_	53245	=	31001
	84246	_	31001	=	53245
(b)	82810	_	61125	=	21685
	82810	_	61125	=	21685
(c)	36990	_	36845	=	145
	36990	_	145	=	36845
(d)	64483	_	23265	=	41218
	64483	_	41218	=	23265
(e)	84067	_	31151	=	52916
	84067	_	52916	=	31151
(f)	69541	_	26132	=	43409
	69541	—	43409	=	26132

# Exercise 4.3

#### 1. Solve each of the following :

#### According to the questions :

(a)	By adding	By subtracting
	5 3 4 1 5	8 8 0 3 1
	+ 3 4 6 1 6	- 2 5 0 1 7
	88031	<u>63014</u> Answer
(b)	By adding	By subtracting
	6 2 3 4 9	99164
	$\frac{+\ 3\ 6\ 8\ 1\ 5}{9\ 9\ 1\ 6\ 4}$	$\frac{-4\ 3\ 1\ 9\ 4}{5\ 5\ 9\ 7\ 0}$ Answer
	99164	<u>55970</u> Answer
(c)	By adding	By subtracting
	5 8 1 6 5	1 0 1 7 8 1
	$\frac{+\ 4\ 3\ 6\ 1\ 6}{1\ 0\ 1\ 7\ 8\ 1}$	$\frac{-83794}{17987}$ Answer
	1 0 1 7 8 1	<u>17987</u> Answer
(d)	By adding	By subtracting
	4 7 3 4 6	7 0 5 2 6
	$\frac{+2\ 3\ 1\ 8\ 0}{7\ 0\ 5\ 2\ 6}$	$\frac{-51063}{19463}$ Answer
	/ 0 5 2 6	<u>19463</u> Answer
(e)		By subtracting
(e)	7 9 0 0 4	1 0 0 0 8 5
(e)	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	1 0 0 0 8 5
	$ \begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
(e) (f)	7 9 0 0 4 + 2 1 0 8 1 1 0 0 0 8 5 By adding	$\frac{1 \ 0 \ 0 \ 0 \ 8 \ 5}{\frac{-4 \ 3 \ 5 \ 6 \ 1}{5 \ 6 \ 5 \ 2 \ 4}} \text{ Answer}$
	7 9 0 0 4 $+ 2 1 0 8 1$ $1 0 0 0 8 5$ By adding $5 4 8 8 4 7$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
	7 9 0 0 4 $+ 2 1 0 8 1$ $1 0 0 0 8 5$ By adding $5 4 8 8 4 7$	$ \begin{array}{r} 1 & 0 & 0 & 0 & 8 & 5 \\ - & 4 & 3 & 5 & 6 & 1 \\ \hline  & 5 & 6 & 5 & 2 & 4 \\ \end{array} $ Answer By subtracting 7 3 0 9 9 6 $ - 3 & 5 & 3 & 7 & 1 & 6 \end{array} $
(f)	7 9 0 0 4 + 2 1 0 8 1 1 0 0 0 8 5 By adding 5 4 8 8 4 7 + 1 8 2 1 4 9 7 3 0 9 9 6	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
(f)	7 9 0 0 4 + 2 1 0 8 1 1 0 0 0 8 5 By adding 5 4 8 8 4 7 + 1 8 2 1 4 9 7 3 0 9 9 6 By adding	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
(f)	7 9 0 0 4 + 2 1 0 8 1 1 0 0 0 8 5 By adding 5 4 8 8 4 7 + 1 8 2 1 4 9 7 3 0 9 9 6 By adding 3 8 3 6 9 2	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
(f)	7 9 0 0 4 + 2 1 0 8 1 1 0 0 0 8 5 By adding 5 4 8 8 4 7 + 1 8 2 1 4 9 7 3 0 9 9 6 By adding 3 8 3 6 9 2 + 2 5 1 8 4 7	$ \begin{array}{r} 1 & 0 & 0 & 0 & 8 & 5 \\ - & 4 & 3 & 5 & 6 & 1 \\ \hline  & 5 & 6 & 5 & 2 & 4 \\ \end{array} $ Answer By subtracting $ \begin{array}{r} 7 & 3 & 0 & 9 & 9 & 6 \\ \hline  & 3 & 7 & 7 & 2 & 8 & 0 \\ \hline  & 3 & 5 & 5 & 3 & 9 \\ \hline  & 6 & 3 & 5 & 5 & 3 & 9 \\ \hline  & - & 4 & 3 & 2 & 3 & 6 & 5 \end{array} $
(f)	7 9 0 0 4 + 2 1 0 8 1 1 0 0 0 8 5 By adding 5 4 8 8 4 7 + 1 8 2 1 4 9 7 3 0 9 9 6 By adding 3 8 3 6 9 2	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
(f)	7 9 0 0 4 + 2 1 0 8 1 1 0 0 0 8 5 By adding 5 4 8 8 4 7 + 1 8 2 1 4 9 7 3 0 9 9 6 By adding 3 8 3 6 9 2 + 2 5 1 8 4 7 6 3 5 5 3 9 By adding	$ \begin{array}{r} 1 & 0 & 0 & 0 & 8 & 5 \\ - & 4 & 3 & 5 & 6 & 1 \\ \hline  & 5 & 6 & 5 & 2 & 4 \\ \end{array} $ Answer By subtracting $ \begin{array}{r} 7 & 3 & 0 & 9 & 9 & 6 \\ \hline  & 3 & 7 & 7 & 2 & 8 & 0 \\ \hline  & 3 & 7 & 7 & 2 & 8 & 0 \\ \end{array} $ Answer By subtracting $ \begin{array}{r} 6 & 3 & 5 & 5 & 3 & 9 \\ \hline  & - & 4 & 3 & 2 & 3 & 6 & 5 \\ \hline  & 2 & 0 & 3 & 1 & 7 & 4 \\ \end{array} $ Answer By subtracting
(f) (g)	7 9 0 0 4 $+ 2 1 0 8 1$ $1 0 0 0 8 5$ By adding $5 4 8 8 4 7$ $+ 1 8 2 1 4 9$ $7 3 0 9 9 6$ By adding $3 8 3 6 9 2$ $+ 2 5 1 8 4 7$ $6 3 5 5 3 9$ By adding $7 8 6 1 4 9$	$\begin{array}{c} 1 & 0 & 0 & 0 & 8 & 5 \\ \hline - & 4 & 3 & 5 & 6 & 1 \\ \hline 5 & 6 & 5 & 2 & 4 \\ \hline \end{array}  \text{Answer} \\ \begin{array}{c} \text{By subtracting} \\ \hline 7 & 3 & 0 & 9 & 9 & 6 \\ \hline \hline 3 & 7 & 7 & 2 & 8 & 0 \\ \hline \hline 3 & 7 & 7 & 2 & 8 & 0 \\ \hline \hline 3 & 7 & 7 & 2 & 8 & 0 \\ \hline \end{array}  \text{Answer} \\ \begin{array}{c} \text{By subtracting} \\ \hline 6 & 3 & 5 & 5 & 3 & 9 \\ \hline \hline - & 4 & 3 & 2 & 3 & 6 & 5 \\ \hline \hline 2 & 0 & 3 & 1 & 7 & 4 \\ \hline \end{array}  \text{Answer} \\ \begin{array}{c} \text{By subtracting} \\ 1 & 0 & 6 & 9 & 0 & 6 & 5 \end{array}$
(f) (g)	7 9 0 0 4 + 2 1 0 8 1 1 0 0 0 8 5 By adding 5 4 8 8 4 7 + 1 8 2 1 4 9 7 3 0 9 9 6 By adding 3 8 3 6 9 2 + 2 5 1 8 4 7 6 3 5 5 3 9 By adding	$ \begin{array}{r} 1 & 0 & 0 & 0 & 8 & 5 \\ - & 4 & 3 & 5 & 6 & 1 \\ \hline  & 5 & 6 & 5 & 2 & 4 \\ \end{array} $ Answer By subtracting $ \begin{array}{r} 7 & 3 & 0 & 9 & 9 & 6 \\ \hline  & 3 & 7 & 7 & 2 & 8 & 0 \\ \hline  & 3 & 7 & 7 & 2 & 8 & 0 \\ \end{array} $ Answer By subtracting $ \begin{array}{r} 6 & 3 & 5 & 5 & 3 & 9 \\ \hline  & - & 4 & 3 & 2 & 3 & 6 & 5 \\ \hline  & 2 & 0 & 3 & 1 & 7 & 4 \\ \end{array} $ Answer By subtracting

2. Subtract each of following and check the answer by suitable addition :

(a)	TTh	Th	H	Т	0	TTh Th H T O	
	8	6	8	4	1	3 3 7 6 7	
	- 5	3	0	7	4	+ 5 3 0 7 4	
	3	3	7	6	7	8 6 8 4 1	
(b)	TTh	Th	H	Т	0	TTh Th H T O	
(b)		Th 7				TTh Th         H         T         O           1         2         3         1         4	
(b)		7					

(c) $\begin{array}{c c} \mathbf{TTh} \ \mathbf{Th} \ \mathbf{H} \ \mathbf{T} \ \mathbf{O} \\ 8 \ 9 \ 0 \ 0 \ 0 \\ - \ 7 \ 8 \ 8 \ 3 \ 1 \\ \hline 1 \ 0 \ 1 \ 6 \ 9 \end{array}$	TTh Th         H         T         O           1         0         1         6         9           +         7         8         8         3         1           8         9         0         0         0         0
Exercise 4	1.4
<b>Solve the following word problem</b> Cost of car bought by Mr Rakesh Money spent on repairing of the ho Total money spent by Mr Rakesh	= 4, 00, 382 puse $= +$ 75, 361
Money in bank account of Mr Rak Money expend by Mr Rakesh Balance money So, ` 4,60,757 is left in Mr Rakesh	$= \frac{-4,75,743}{4,60,757}$ Ans
By the formula sum of two number Number = $7, 34, 56$ One number = $-3, 01, 20$ Other number = $4, 33, 35$	2 3
To find the required number, first 3,10,200 and than subtract 2,7500	
$ \begin{array}{r} 1, 50, 000 \\ + 3, 10, 200 \\ \hline 4, 60, 200 \end{array} $	$ \begin{array}{r} 4, \ 60, \ 000 \\ - \ 2, \ 75, \ 000 \\ \hline 1, \ 85, \ 200 \end{array} $
So, the required number is, 1,8520	
Candles made for Diwali = 28 Mary gave to her friends = $-12$ balance candles = $16$ So, 16,128 candles are left with Ma	, 197 candles , 128 candles
Rohit has in his collection Foreign stamps in his collection Balance stamps	$= 22, 811 \text{ stamps} \\ = -4, 936 \text{ stamps} \\ = 17, 875 \text{ Answer}$
Car mechanic earns in a month Scooter mechanic earns in a month Here, `27,149>`13,126 By subtracting, we find That car mechanic earns more and	= 14, 023
	25, 000         seats           19, 470         seats           5, 530         seats           Answer
Seema got of sum of 51,830 by add	ling 51,178 and a number.

8. Seema got of sum of 51,830 by adding 51,178 and a number. So, 51,830-51,178 = Required number So, the required number = 51,830-51,178

		= 652Answer
Working :	51, 830	
	- 51, 178	
	652	

1.

2.

3.

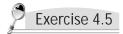
4.

5.

6.

7.





## Frame word problems for the following subtraction facts:

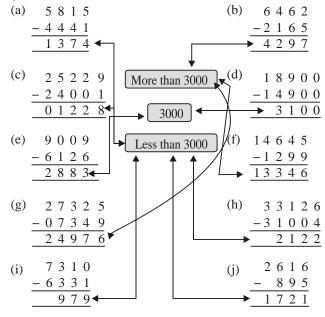
- 1. In a school library there are 42,685 books in all, out of which 20,128 books are of English language. How many books are there of the other languages, in the library?
- **2.** In a city, total population is 5,32,695 out of which 1,49,325 are children., Find the total number of men and women in the city.
- **3.** An army officer received `6,75,100 on his retirement. He bought a car for `2,16,111. How much money he has now?
- Kushal has ` 57,492 in his bank account.
   He withdraws ` 12600 from his account to purchase a TV set. Now, what is the balance money in his account?
- 5. What number should be added to 11,997 to get 19,947.



1. Estimate the difference by rounding off each number to the nearest thousands and find the actual difference for each of the following. Complete the table :

Sl. No.	Sum	Rounding of numbers up to 10000	Estimated difference	difference	Is the estimation close? (Yes/No)
(a)	8235 - 4185	8000 - 4000	4000	4050	Yes
(b)	9947 - 4862	10000 - 5000	5000	5085	Yes
(c)	14025 - 12890	14000 - 13000	1000	1135	No
(d)	45135 - 23243	45000 - 23000	22000	21892	Yes
(e)	57416 - 34394	57000 - 34000	23000	23022	Yes
(f)	84973 - 29304	85000 - 29000	56000	55669	No

2. Join each problems to the correct estimated answer given at the centre in the box :



Revision

### 1. Write each of the following in columns and subtracts :

(a)	8 0 0 0	(b)	7	1 3	0
	- 6 5 2 9		- 3	8 4	5
	1 4 7 1		3	2 8	5
(c)	3 1 2 3 0	(d)	9	1 2	65
	- 2 1 0 8 8		- 6	89	4 9
	1 0 1 4 2		2	2 3	1 6

2. For each of the following addition facts, write two subtracts facts :

(a) 7448 – 6312	=	1136
7448 – 1136	=	6312
(b) 8297 – 1065	=	7232
8297 - 7232	=	1065
(c) 38492 – 23323	=	15169
38492 - 15169	=	23323
(d) 77429 – 34164	=	43265
77429 - 43265	=	34164
Solve the following :		
(a) By adding		By subtracting
2 3 1 9		7687
+ 5 3 6 8		- 3 4 7 9
$\frac{+5368}{7687}$		$\frac{-3479}{4208}$ Answer
(b) By adding		By subtracting
1 8 6 5		4 8 3 8
+ 2 9 7 3		- 946
4 8 3 8		3 8 9 2 Answer
(c) By adding		By subtracting
58641		83627
+ 2 4 9 8 6		-16329
83627		67298 Answer
(d) By adding		By subtracting
27989		42663
+14674		1 1 0 0 0
+ 1 4 6 7 4		-11008

3.

4. Subtracts each of the following and check the answer by suitable adding :

(a)	Th	H	Т	0			1	ſh	H	Т	0
	8	0	0	0	Г			1	6	7	5
-	- 6	3	2	5			+	6	3	2	5
	1	6	7	5				8	0	0	0
(b)	TTh	Th	H	Т	0	T	ſh 1	ſh	H	Т	0
(b)	TTh 2			т 2		<b>T</b> 1 					
	<b>TTh</b> 2		1						2		
	2	9	1					3	2		

5. Solve the following word problems :

37

(a) Number of total passengers in the train = 2686Number of children out of total passengers = -1268Number of adults in the train = 1418So, there were 1418 adults in the train. Answers



(b) Total flowers used to make rangoli 2789 = Number of red flowers used in rangoli = -1956 $8\overline{3}\overline{3}$  Ans = Number of white flowers So, there are 833 white flowers in the rangoli.

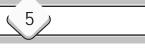
#### Solve the following : 6.

(a) 1 0 0 0 0
---------------

- 5 9 3 7	So, 4063 should be added to 5937 to
4 0 6 3	make it 10000. Answer

4 8 1 3 (b) So we should subtract 4813 from 3 2 4 7 8060 to get 3247 as the difference. 8 0 6 0 Answer

(checking: 8060 - 4813 = 3247; so, answer is correct.)



Multiplication

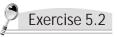
## Exercise 5.1

- 1. Write the multiplication fact : (a) 6 groups of 2 butterflies Multiplication fact:  $6 \times 2 = 12$ 
  - (b) 3 groups of 2 birds: Multiplication fact:  $3 \times 2 = 6$
- 2. An aquarium has 6 fish. Write the multiplication fact to find the number of fish in 7 aquariums. Number of fish in 1 aquarium = 6Number of fish in 7 aquarium =  $6 \times 7 = 42$  (Multi. fact) So, there are 42 fish in 7 aquariums.
- 3. Fill in the blanks using the multiplication table : (a) Numbers of cars 1 2 3 4 5 6 7 8 9 10

- /											10	
	Number of wheels	4	8	12	16	20	24	28	32	36	40	

(b)	Number of children	1	2	3	4	5	6	7	8	9	10
	Number of hands	2	4	6	8	10	12	14	16	18	20

- 4. Write the product using multiplication table :
  - (a)  $4 \times 3 = 12$ (b)  $6 \times 7 = 42$ (c)  $8 \times 5 = 40$ (d)  $9 \times 9 = 81$



1. Multiply using column method :

(a)	$2463 \times 3 =$	(b) $4287 \times 2 =$
	11	$\bigcirc$ (1) (1)
	2 4 6 3	4 2 8 7
	× 3	× 2
	7 3 8 9 Ans.	<u>8574</u> Ans.
$\langle \rangle$		
(c)	$1095 \times 7 =$	(d) $5403 \times 6 =$
(c)	$1095 \times 7 =$ $\bigcirc \bigcirc \bigcirc \bigcirc$	(d) $5403 \times 6 =$ 2 $\bigcirc$ 1
(c)		
(c)	$\bigcirc 63$	201

(e) $8932 \times 4 =$	(f) $3761 \times 5 =$
31	330
8 9 3 2	3 7 6 1
$\times$ 4	× 5
35 7 2 8 Ans.	18 8 0 5 Ans.

#### 2. Multiply using expansion method :

	inpij usii	-9 .	
(a)	$3402\!\times\!2$	=	$(3000+400+0+2) \times 2$
		=	$(3000 \times 2) + (400 \times 2) + (0 \times 2) + (2 \times 2)$
		=	6000 + 800 + 0 + 4
		=	6804 Answer
(b)	$6947 \times 4$	=	$(6000+900+40+7) \times 4$
		=	$(6000 \times 4) + (900 \times 4) + (40 \times 4) + (7 \times 4)$
		=	24000 + 3600 + 160 + 28
		=	27788Answer
(c)	$1234 \times 8$	=	$(1000+200+30+4) \times 8$
		=	$(1000 \times 8) + (200 \times 8) + (30 \times 8) + (4 \times 8)$
		=	8000 + 1600 + 240 + 32
		=	9872 Answer
(d)	$7954\!\times\!3$	=	$(7000+900+50+4) \times 3$
		=	$(7000 \times 3) + (900 \times 3) + (50 \times 3) + (4 \times 3)$
		=	21000 + 2700 + 150 + 12
		=	23862 Answer
(e)	$9013\!\times\!5$	=	$(9000+0+10+3) \times 5$
		=	$(9000 \times 5) + (0 \times 5) + (10 \times 5) + (3 \times 5)$
		=	45000 + 0 + 50 + 15
		=	45065 Answer
(f)	$8864 \times 7$	=	$(8000+800+60+4)\times7$
		=	$(8000 \times 7) + (800 \times 7) + (60 \times 7) + (4 \times 7)$
		=	56000 + 5600 + 420 + 28
		=	62048Answer
			Exercise 5.3

M	ul	tin	1.7	•
1.1.1	u		<b>JI V</b>	

fultiply :				68
(a) 24	$ \begin{array}{r} \times 10 &= 24 \\ &= 68 \\ &= 27 \end{array} $	$\times 4$	68×40 then 68>	$\frac{\times 4}{27 2}$ $\frac{40}{40} = 2720$
(c) 73	$\times 30 \rightarrow$ then	73×3 = 73×30 =		$ \begin{array}{r} 7  3 \\ \times  3 \\ \hline 21  9 \end{array} $
(d) 19	$6 \times 60 \rightarrow$ then	196×6 = 196×60 =	)	$\frac{21}{196} \times \frac{6}{1176}$
(e) 12	$\times 100 = 12$	00		73
(f) 73	$\times 600 \rightarrow 73$ then	3×6 = 73×600 =	)	$\frac{\times 6}{438}$
(g) 67	$\times 800 \rightarrow$ then	67×8 = 67×800 =	)	$ \begin{array}{r} 67 \\ \times 8 \\ \overline{536} \end{array} $
(h) 34	$\times 500 \rightarrow$ then	34×5 = 34×500 =	)	$34 \\ \times 5 \\ \hline 170$



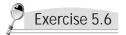
	(i) $37 \times 100 \rightarrow 3700$ (j) $92 \times 2000 \rightarrow 92 \times 2$ = then $92 \times 2000$ =	
	(k) $84 \times 5000 \rightarrow 84 \times 5 =$ then $84 \times 5000 =$	
	(1) $52 \times 8000 \rightarrow 52 \times 8 =$ then $52 \times 8000 =$	0
	Exercis	se 5.4
1.		$40 \times 18$ 4 0
	$74$ $\times 11$ $74$ $+740$	$\frac{\times 18}{320}$
	$\frac{1}{814} \frac{1}{74 \times 11} = 814$	$\frac{720}{40 \times 18} = 720$
	(c) $258 \times 31$ (d) 258 $\times 31$ 258	$712 \times 23$ $712$ $\times 23$
	$   \begin{array}{r}     258 \\     +7740 \\     \overline{7998}   \end{array} $	$   \begin{array}{r}     2 1 3 6 \\     + 1 4 2 4 0 \\     \hline     1 6 3 7 6   \end{array} $
	$258 \times 31 = 7998$ (e) $262 \times 77$ (f) $262$	$712 \times 23 = 16376$ $978 \times 95$ 978
	$\frac{\times 77}{1834} + 18340$	$\frac{\times 95}{4890} + 88020$
	$\frac{20174}{262 \times 77} = 20174$ (g) 1127 × 29	$978 \times 95 = 92910$ (h) 2034 × 47
	$ \begin{array}{r}  1127 \\  \times 29 \\  \hline  10143 \end{array} $	$2034$ $\times 47$
	+22540 32683	$   \begin{array}{r}     1 4238 \\     + 81360 \\     \hline     95598 \\     \hline     2024 \\     47 \\     05508   \end{array} $
	$1127 \times 29 = 32683$ (i) $1234 \times 56$ $1234$	$2034 \times 47 = 95598$ (j) $234 \times 234$ 234
	$\frac{\times 56}{7404}$ + 61700	$\begin{array}{r} \times 234 \\ \hline 936 \\ 7020 \\ 16000 \end{array}$
	$\frac{69104}{1234 \times 56} = 69104$	$\frac{+46800}{54756}$ $234 \times 234 = 54756$

	(k) $409 \times 203$	(1) 22	22×222	
	409		222	
	$\times 203$		$\times 222$	
	$1\ 2\ 2\ 7\\ 0\ 0\ 0\ 0$		444 $4440$	
	+81800	+ 4	4400	
	83027	4	9284	
	$409 \times 203 = 83027$	22	2 × 222 =	= 49284
2.	Fill in the boxes :			
	(a) 97	(b		423
	$\frac{\times 42}{194}$			65
	+3880			380
	4074		27	495
	(c) 3258	(d	l) (	501
	× 23			163
	9774 + 65160			803 060
	$\frac{+03100}{74934}$		+60	
				963
		Exercise 5	5.5	
	Solve using lattice me	ethod :		
	(a) $142 \times 15$ 1	$\frac{4}{10}$	1. 1.	$42 \times 15 = 2130$
	4 0 5 2	4 2 2	$\begin{bmatrix} 1 & 1^{\prime} \\ 5 & \end{array}$	-2 ~ 13 - 2130
		$\frac{1}{3}$ 0		
	(b) 167×281	6 7		
	$(0) 107 \times 20 1$	$\frac{1}{2}$ $\frac{1}{4}$	2 1	$67 \times 28 = 4676$
	4 0 8 4	1 8 5 6	8	
	7	7 6		
	(c) $625 \times 12$ 6	2 5	7	
	(c) $625 \times 12  6 \\ 7  12  6 \\ 7  12  6 \\ 7  5 \\ 5 \\ 5 \\ 5 \\ 5 \\ 7 \\ 5 \\ 5 \\ 5 \\ 5 \\$	$\frac{0}{2} \frac{0}{5}$	1 6	$25 \times 12 = 7500$
		$\frac{1}{0} \frac{1}{0}$	2	
	3	0 0		

(d) 
$$314 \times 29$$
 3 1 4  
9 2 7 0 9 3 6 9  
1 0 6 9 3 1 4 29 = 9106

(e) 
$$179 \times 53 \xrightarrow{1}{0} \xrightarrow{7}{9} \xrightarrow{9}{1} 51 \xrightarrow{7}{9} 51 = 9487$$
  
9  $9 \xrightarrow{0}{3} \xrightarrow{2}{1} \xrightarrow{2}{7} 3$ 

(f) 
$$109 \times 79$$
 1 7 9  
8 0 7 0 6 3  
8 0 9 0 8 1 9  
6 1 1 9 109 × 79 = 8611



1.	The number of floors in building = 46 The number of flats in each floor = 9 4 6 Total number of flats in building = $46 \times 9 \times 9$ = $414 \times \frac{414}{414}$
2.	So, there are 414 flats in the building.Trips of bus everyday= 7People travel in a trip= 75The number of people travel everyday= $7 \times 75$ $\times 7$
	$= 525 \qquad \overline{525}$
3.	So, 525 people travel in the bus every day. the number of pencils in a box = 12 8 3 The number of boxes = 83 $\times 12$ The total number of pencils = 83 × 12 166
	$= 996 \qquad 830$ So, there are 996 pencils in 83 such boxes. $996$
4.	The number of reams = 43 $500$ The number of sheets in a ream = 500 $\frac{\times 43}{1520}$ The total number of sheets in 43 reams = $43 \times 500$ $\frac{+20000}{21500}$
5.	The length of cloth= 47 metres $356$ The cost of 1 metre cloth= $356$ $\times 47$ The total cost of cloth= $(356 \times 47)$ $2492$
	= 16,732 + 14240 = 16,732 + 14240 = 16,732So, the cost of 47 metre cloth is = 16,732
6.	The notes in the bag = 289 The value of one note = 50 Total money in the bag = $(50 \times 289)$ = 14,450 + 14450
	So, there are = 14,450 in the bag. $\frac{+14450}{14450}$
7.	The number of days in the month of July = 31 $31$ We know, $\times 24$
	= 744  hours in the month of July. + 620 So, there are 744 hour in the month of July.
8.	The number of classes in the school $= 10$ The number of sections in each class $= 4$ The total number of sections in the school $= 10 \times 4 = 40$
	The total number of students in the school $= 50 \times 40 = 2000$ So, the total number of students in classes 1 to 10 is 2000.
9.	We know, 168
	There are 7 days in a week. $\times 60$ And, the number of hours in a day = 24 $000$
	So, The number of hours in a week = $24 \times 7$ + $10080$ = $168$ + $10080$
	We know, the number of minutes in 1 hour = $60$ So, the number of minutes in 168 hours = $168 \times 60$ = $10080$
10.	Thus, there are 10080 minutes in a week. We know, the number of minutes in 1 hour = $60 \times 6 = \frac{360}{000} = 360 + 21600$
	We know, the number of seconds in 1 minute = $60 \frac{\pm 21600}{21600}$ So, the number of seconds in 360 minutes = $360 \times 60$ = 21600

	Thu	is, there are 21600 seconds in 6 hours.					
11.	The	e number of sheets in 1 ream $= 500$ $3500$					
	So,	the number of sheets in 7 reams = $500 \times 7$ $\times 5$					
	Í	$= 3500 \qquad \frac{17500}{17500}$					
	The	photos can be printed on 1 sheet $= 5$					
	So, The number of photos can be printed on $= 3500 \times 5$						
		0  sheets = 17500					
	Thu	is 17500 photos can be printed with 7 reams.					
		Exercise 5.7					
1.	Estimate the product :						
	(a)	(a) $67 \times 31$					
	67 is rounded up to 70 and 31 is rounded down to 30.						
	Thus, extimated product = $70 \times 30 = 2100$						
	(b) 245×131						
	245 is rounded down to 200 and 131 is rounded down to 100.						
	Thus, estimated product = $200 \times 100 = 20000$						
	(c)	543×76					
	(0)	543 is rounded down to 500 (nearest hundreds) and					
	76 is rounded up to 80 (nearest tens).						
	(1)	Thus, estimated product = $500 \times 80 = 40000$					
	(d)	$53 \times 88$					

- 53 is rounded down to 50 and 88 is rounded up to 90. Thus estimated product =  $50 \times 90 = 4500$
- (e) 116×475 116 is rounded down to 100 and 475 is round up to 500. Thus, estimated product =  $100 \times 500 = 50000$ (f) 777×98 777 is rounded up to 800 (nearest hundreds) and 98 is rounded up to 100 (nearest tens). Thus, estimated product =  $800 \times 100 = 80000$ (g)  $123 \times 256$ 123 is rounded down to 100 and 256 is rounded up to 300. Thus, estimated product =  $100 \times 300 = 30000$ (h) 56×78 56 is rounded up to 60 and 78 is rounded up to 80. Thus, estimated product =  $60 \times 80 = 4800$ 2. The number of bangles in 1 box = 47The number of boxes = 63 So, the number of bangles in all  $= 47 \times 63$ 47 is rounded up to 50 and 63 is rounded down to 60. Thus, the estimated number of bangles in all  $= 50 \times 60$ = 30003. The number of books in 1 shelf = 336 = 172 The number of shelves So, the number of book in 172 shelves  $= 336 \times 172$ 336 is rounded down to 300 and 172 is rounded up to 200. Thus, the estimated number of books in all  $= 300 \times 200$ = 60000Weight of 1 sack of cement  $= 189 \, \text{kg}$ The number of sacks of cement = 84 So, the weight of 84 sacks of cement =  $(189 \times 84)$  kg 189 is rounded up to 200 (nearest hundred) and 84 is rounded down to 80 (nearest tens). Thus, the estimated weight of cement in all =  $(200 \times 80)$  kg  $= 16000 \, \text{kg}$

4.

Solve.	Revision	1	(b) $222 \times 11 \ 2 \ 2 \ 2 \ 2 \ 2 \ 2 \ 2 \ 2 \ 2 $
(a) 1579×9	$ \begin{array}{r} 1579 \\ \times 9 \\ \hline 14211 \end{array} $	1579×9=14211	(c) $662 \times 13$ 6 6 2 $8$ $1$ $8$ $1$ $8$ $0$ $6$ $3$ $662 \times 13 = 8606$ $8$ $1$ $8$ $1$ $8$ $0$ $6$ $3$ $662 \times 13 = 8606$
(b) 84×48		84×48=4032	(d) $203 \times 41 \ 2 \ 0 \ 3$ 8 $\begin{array}{c} 0 \ 8 \ 0 \ 0 \ 1 \ 2 \ 3 \ 3 \ 2 \ 3 \ 3 \ 3 \ 3 \ 3 \ 3$
(c) 383×54	$     \begin{array}{r}             \underline{4032} \\                                    $	383×54=20682	3. The number of children in 1 activity club = $37$ The number of clubs = $21$ So, the number of children in 21 clubs = $37 \times 21$ = $777$ Thus, there will be 777 children in 21 clubs.4. The cost of 1 table = $7654$ $7654$
(d) 2483×28	$     \begin{array}{r}             20682 \\             2483 \\                                    $	2483×28=69524	The number of tables = 9 $\times 9$ So, the cost of 9 tables = $(7654 \times 9)$ $\overline{68886}$ = $68,886$ Thus, the total amount Amit will have to pay for the tables is R68,886 5. Time taken to paint 1 hoarding = $306$ minutes $306$ The number of hoarding = $24$ $\times 24$
(e) 346×248	$     346 \\     \times 248 \\     \hline     2768 \\     + 13840 \\     69200 $	346×248=85808	So, the time that will be taken $1 2 2 4$ to paint 24 hoarding $= (306 \times 24)$ minutes $+ 6120$ = 7344 minutes $7344Thus, Ajay will take 7344 minutes to paint24 hoarding.6. Water that can be filled in 1 container = 325 litres 325$
(f) 2476×7	$     \begin{array}{r} \underline{85808} \\     2476 \\     \times 7 \\     \overline{17332} \\   \end{array} $	2476×7=17332	The number of containers= 235 $\times 235$ So, the water that can be filled in 2359750Containers= (325 × 235) litres $+65000$ = 76375 litres $-76375$ Thus, 76375 litre water can be filled in 235 containers.
(g) 709×68	$     \begin{array}{r}       709 \\       \times 68 \\       \overline{5672} \\       +42540 \\       \overline{48212}     \end{array} $	709×68=48212	7. The number of students = the number of books = $32   1001$ Each book contains = $1001$ pages So, the number of pages in $32$ books = $1001 \times 32   2002$ Thus, there are $32032$ pages in all . $+ 30030   32032$
(h) 206×304	$     \begin{array}{r}       2 \ 0 \ 6 \\       \times 3 \ 0 \ 4 \\       \hline       8 \ 2 \ 4 \\       0 \ 0 \ 0 \ 0 \\       + 6 \ 1 \ 8 \ 0 \ 0 \\       \hline       6 \ 2 \ 6 \ 2 \ 4 \\     \end{array} $	206×304=62624	6   Division     Page 58 : Complete the following :
Multiply using	lattice method :		<b>1.</b> $803 \div 1 = 803$ <b>2.</b> $794 \div 794 = 1$ <b>3.</b> $2658 \div 0 = Netroscible$ <b>4.</b> $0 \div 001 = 0$

## 2. Multiply using lattice method :

1.

# (a) $145 \times 45$ 6 $\frac{0}{0} \frac{4}{5} \frac{1}{2} \frac{6}{5} \frac{1}{2} \frac{1}{5} \frac{$

3.  $2658 \div 0 = \text{Not possible}$ 

**5.**  $3004 \div 1 = 3004$ 

**7.**  $0 \div 864 = 0$ 

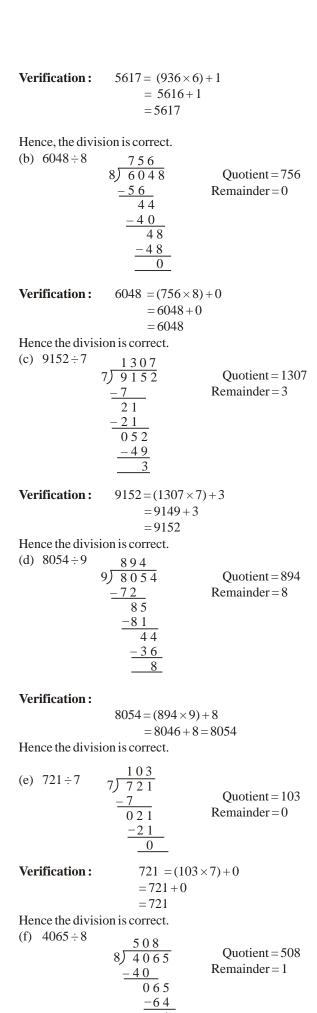
**9.**  $500 \div 500 = 1$ 

**4.**  $0 \div 991 = 0$ 

6.  $4556 \div 4556 = 1$ 

8.  $631 \div 1 = 631$ 

	Exercise 6.1	(c) $8960 \div 8$ $\frac{1120}{8 \times 960}$ Ouotient = 1120
1	Find the quotient and the remainder :	8) 8960 Quotient = 1120 $\frac{-8}{09}$ Remainder = 0
1.	(a) $60 \div 10 \rightarrow \text{Quotient} = 6$ , remainder = 0	09
	(b) $95 \div 10 \rightarrow \text{Quotient} = 9$ , remainder = 5	$\frac{-8}{16}$
	(c) $800 \div 100 \rightarrow \text{Quotient} = 8$ , remainder = 0	$\frac{-1 \ 6}{-0 \ 0}$
	(d) $7256 \div 100 \rightarrow \text{Quotient} = 72$ , remainder = 56 (a) $9800 \div 1000 \rightarrow \text{Quotient} = 9$ remainder = 800	-0.0
	(e) $9800 \div 1000 \rightarrow \text{Quotient} = 9$ , remainder = 800 (f) $35625 \div 1000 \rightarrow \text{Quotient} = 35$ , remainder = 625	(d) $1023 \div 9$ <u>113</u>
	(g) $56943 \div 100 \rightarrow \text{Quotient} = 569, \text{remainder} = 43$	9) $1023$ Outlient - 113
	(h) $72194 \div 10 \rightarrow \text{Quotient} = 7219$ , remainder = 4	$\frac{-9}{12}$ Remainder = 6
2.	Fill in the blanks : (a) $200 \div 10 = 20$ (b) $0400 \div 100 = 04$	$\frac{-9}{33}$
	(a) $200 \div 10 = 20$ (b) $9400 \div 100 = 94$ (c) $15000 \div 1000 = 15$ (d) $3000 \div 10 = 300$	33
	(c) $10000 \div 100 = 10$ (d) $5000 \div 10 = 500$ (e) $10000 \div 100 = 100$ (f) $42000 \div 1000 = 42$	$-\frac{27}{6}$
	(g) $60000 \div 100 = 600$ (h) $9000 \div 1000 = 9$	
2	(i) $2400 \div 10 = 240$	(e) $3721 \div 5$ $5\overline{\smash{\big)}\ 3721}$
3.	Solve the following problems : (a) The number of tube-wells = 19600	
	The number of villages $= 1000$	22 Remainder = 1
	So, the number of tube-wells installed in each village	$\frac{-20}{21}$
	$= 19600 \div 100$	$\frac{-20}{1}$
	= 196 Thus, 196 tube-wells were installed per village.	_1
	(b) The number of notebooks = 700	1726
	The number of children $= 70$	(f) $6945 \div 4$ $4 \overline{\smash{\big)}} \begin{array}{c} 1736\\ \overline{6945} \end{array}$ Outpit = 1726
	So, 1 child gets $= (700 \div 70)$ notebooks $= 10$ notebooks	$\frac{-4}{29}$ Quotient = 1736 Remainder = 1
	Thus, each child gets 10 notebooks.	<u>-28</u>
	Exercise 6.2	14 -1 2
1.	Tick (✓) the correct answer :	$\frac{-12}{25}$
1.	So, (a) $3968 \div 4$ 9 6 7	$\frac{-24}{1}$
	$4\overline{\smash{\big)}3868}$	
	$\frac{-36}{26}$	(g) $8345 \div 7$ $7 \xrightarrow{1192}{8345}$ (h) $6395 \div 8$
	$\frac{-24}{28}$	
	28	1 J
	So, option (a) is correct. $\frac{-28}{0}$	Quotient = 1192 $-\frac{7}{64}$ $-\frac{56}{79}$
2.	Divide to find the quotient and remainder :	Quotient = 1192 $-\frac{7}{64}$ $-\frac{56}{79}$ Remainder = 1 $-\frac{63}{15}$ $-\frac{72}{75}$
	(a) $6435 \div 4$ $1608 \\ 4 \overline{\smash{\big)}} 6435$ Quotient = 1608	$   \begin{array}{cccc}     15 & & 75 \\     -14 & & -72 \\     \hline     3   \end{array} $
		$-\underline{14} \qquad -\underline{72} \\ \underline{3}$
	24	Quotient = 799
	$\frac{-24}{035}$	Remainder $= 3$
	$\frac{-32}{3}$	3. Find the quotient and remainder and verify your
	5	<b>answer :</b> (Note : Use the following fact to verify the answer :
	(b) $7018 \div 6$ $\frac{1169}{67018}$ Ouotient = 1169	$Dividend = (Quotient \times Divisor) + Remainder$
		(a) $5617 \div 6 \qquad 936 \\ 6 \overline{\smash{\big)}\ 5617}$
	10	
	$\frac{-6}{41}$	$\overline{21}$ Remainder = 1
	<u>-36</u>	$\frac{-18}{37}$
	$ \begin{array}{r} -36\\ \overline{58}\\ -\underline{54}\\ \overline{4}\end{array} $	$\frac{-36}{1}$
	$\frac{-34}{4}$	
		42



Verification :	$4065 = (508 \times 8) + = 4064 + 1 = 4065$	+1		
Hence the divisi (g) 8625÷6	on is correct. $ \begin{array}{r}       \frac{1437}{8625} \\       -6 \\       26 \\       -24 \\       22 \\       -18 \\       45 \\       -42 \\       3 \end{array} $	Quotient = 1437 Remainder = 3		
Verification :	$8625 = (1437 \times 6)$ = $8622 + 3$ = $8625$	)+3		
Hence the divisi (h) 7384÷5	on is correct. 1476 5)7384 -5 23 -20 38 -35 34 -30 4	Quotient = 1476 Remainder = 4		
Verification :	7294 (1476.55	N + 4		
$7384 = (1476 \times 5) + 4$ $= 7380 + 4 = 7384$				
Hence the divisi The number of b				

The number of groups = 8So, the number of banners given to each group  $= 6296 \div 8$ 

$$\begin{array}{r}
 787 \\
 8 \overline{\smash{\big)}} 6296 \\
 \underline{-56} \\
 69 \\
 \underline{-64} \\
 \underline{-56} \\
 \underline{-56} \\
 \underline{0}
 \end{array}$$

=787

Thus, 787 banners were given to each group.

1. Tick  $(\checkmark)$  the correct answer :

By the fact : Divisor = (Dividend – Remainder)  $\div$  Quotient =  $(7890-3) \div 717$ 

$$\begin{array}{rcl}
\frac{11}{717} & = (7050 - 5)^{-1} \\
717 & = 7887 \div 717 \\
\underline{-717} & = 11 \\
\underline{-717} \\
\underline{-717} \\
\times \end{array}$$

So, the correct answer is (d) 11.

43

4.

2.	Find the quotient and remainder :		(c) $6832 \div 40$	40) 6832	
	(a) $3185 \div 12 \qquad 265 \\ 12 \overline{)3185}$	Quotient = 265		$\frac{-40}{283}$	Quotient = 170 Remainder = 32
		emainder = 5		283 - 283	
	$\frac{-72}{65}$			$\frac{-283}{32}$	
	$ \begin{array}{r} 65\\ -60\\ \underline{5} \end{array} $		Checking:	$6832 = (170 \times 40) = 6800 + 32 = 6832$	
	(b) $4080 \div 15 \qquad 15 \qquad 272 \\ 15 4080 $		So, the division		
	- 3 0	Quotient = $272$ emainder = $0$	(d) 8606÷28	$\frac{-84}{206}$	Quotient = 307 Remainder = 10
	$\frac{-30}{\times}$			-196 10	
	(c) $6247 \div 13$ 4 8 0	Quotient = 480	Checking:	$8606 = (307 \times 28)$ = $8596 + 10$	
		emainder = 7	<b>G</b> .1 11 11	=8606	
	$   \frac{104}{-104} $		So, the division (e) $5196 \div 39$		
	07		(-)	$   \begin{array}{r}     133 \\     39) 5196 \\     \underline{-39} \\     219   \end{array} $	Quotient = 133
	(d) $8962 \div 14 \qquad \begin{array}{c} 6 & 4 & 0 \\ 1 & 4 \\ \end{array} \xrightarrow{6 & 9 & 6 & 2} \end{array}$				Remainder = 9
	_ 8 /	Quotient = $640$ emainder = $7$		$\frac{-127}{126}$	
	$\frac{56}{-56}$			<u>-117</u> <u>9</u>	
	02		Checking :	$5196 = (133 \times 39)$	) + 9
3.	Divide the following and check your a $(x)$ 7120 : 22	answer:	checking.	=5187 + 9	, , , , , , , , , , , , , , , , , , , ,
	(a) $7120 \div 22 \qquad 323 \\ 22 7120$	Quotient = 323	So, the division	= 5196 is correct.	
	5 2	emainder = 14	(f) 9007÷19	474	
	$\frac{-44}{80}$		(-) ,	474 19) 9007 -76	Quotient=474
	$\frac{-66}{14}$			$\frac{-76}{140}$	Remainder = 1
	<b>Checking:</b> Dividend = (Quotient $\times$ D	Nivisor)   Domaindar		$\frac{-133}{77}$	
	$7120 = (323 \times 22) + 1$			$\frac{-76}{1}$	
	=7106+14 =7120		Chaoling	$0007 - (474 \times 10)$	\ . <b>1</b>
	So, the division is correct.		Checking :	$9007 = (474 \times 19)$ = $9006 + 1$	) + 1
	(b) $4953 \div 35 \qquad 1 \ 41 \ 3 \ 5 \ 49 \ 5 \ 3$	Quotient = 141	So, the division	= 9007 is correct	
	2.7	emainder = 18	(g) $8562 \div 22$	<u>3 8 9</u> 2 2) 8 5 6 2	
	$\frac{-140}{53}$				Quotient = 389 Remainder = 4
	$\frac{-35}{18}$			$\frac{-66}{196}$	
	1 8			$\frac{-176}{202}$	
	<b>Checking:</b> $4953 = (141 \times 35)^{-1}$			-198 4	
	=4935+18 =4953	5	Checking:	$8562 = (389 \times 22)$ = $8558 + 4$	)+4
	So, the division is correct.			=8562	
		44	So, the division	is correct.	

)



(h)  $9846 \div 26$   $2 6 \overline{\smash{\big)} 9846}$  - 7 8 2 0 4 - 1 8 2 2 2 6 - 2 0 8 - 1 8 - 2 0 8 - 1 8 - 2 0 8 - 2 0 8 - 1 8 - 2 0 8 - 2 0 8 - 2 0 8 - 2 8 - 26 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8 - 2 - 20 8-

So, the division is correct.

## 4. Divide the following using multiplication tables :

(a) 8895 ÷ 11 808 Quotient = 808 11) 8895 <u>-88</u> Remainder = 7095  $\frac{-88}{7}$ 435 (b) 6534÷15 15) 6534 Quotient = 435-60 Remainder=9 53  $-\frac{45}{84}$ -75 9(c)  $7329 \div 13 \quad 13 \quad 7329$ <u>-65</u> Quotient = 563 82 Remainder = 10 -78 49  $\frac{-39}{10}$ 397 (d)  $5562 \div 14 + 14$  4 5562 $\frac{-42}{136}$ Quotient = 397 Remainder = 4 -126 102<u>-98</u> 4 385 5. (a) Quotient = 385, Divisor = 36 $\times 36$ Dividend = Quotient × Divisor 2310  $= 385 \times 36$ +11550=13860 13860 So, the dividend is 13860. (b) Quotient = 726, Divisor = 43, Remainder = 19

Dividend = 
$$(26, 51, 1301 - 45, 16, 11001 - 15)$$
  
Dividend =  $(Quotient \times divisor) + Remainder 726$   
=  $(726 \times 43) + 19$   
=  $31218 + 19$   
=  $31237$   
 $+ 29040$   
31218

45

## 6. Solve the following word problems :

(a) Raghu travelled in 6 days = 6144 kmHe travelled in 1 day  $= (6144 \div 6) \text{ km}$ 

He travelled in 1 day 
$$= (0.144 - 0.000)$$
  
 $= 1024 \text{ km}$ 

$$\begin{array}{r}
1 \ 0 \ 2 \ 4 \\
\hline
6 \ 6 \ 1 \ 4 \ 4 \\
\hline
-6 \\
\hline
0 \ 1 \ 4 \\
\hline
-2 \ 4 \\
\hline
-2 \ 4 \\
\hline
0
\end{array}$$

Thus, Raghu travelled 1024 kilometres in one day.

(b) The number of books = 7800 The number of boxes = 40 So, the number of books in 1 box = 7800 ÷ 40 Thus, there are 195 books in each box.

195
40)7800
<u>-40</u>
380
-360
200
-200
0

1.	Tick ( $\checkmark$ ) the correct answer :	42
	1678 is rounded up to 1680	40) 1680
	43 is rounded down to 40	<u>-160</u>
	Now, the estimated quotient = $1680 \div 40$	8 0
	=42	-80
	So, the correct answer is (c) 42.	0
2.	Divide and find the estimated quotient :	
	(a) $620 \div 29$	

(a)	630÷28		
	We round off 630 to the nearest	100 = 600	
	We round off 28 to the nearest	10=30	
	Now, the estimated quotient	$= 600 \div 30$	
		=20	
(b)	231÷2		
	We round off 231 to the neares	t  10 =  230	
	Now the estimated quotient	$= 230 \div 2$	
	115	=115	
	2) 2 3 0		
	-2		
	03		
	-2		
	$\frac{-10}{0}$		

(c)  $702 \div 21$ We round off 702 to the nearest 100 = 700  $20\overline{)}$  700We round of 21 to the nearest 10 = 20Now, the estimated quotient  $= 700 \div 20$   $\overline{)}$  100 = 35 -1000

(d)  $1011 \div 20$ 

We round off 1011 to the nearest 1000 = 1000We round off 22 to the nearest 10 = 20Now, the estimated quotient  $= 1000 \div 20$  $201 \pm 1000$ 

$$\begin{array}{c} 2 \ 0 \\ -1 \ 0 \ 0 \\ 0 \ 0 \end{array}$$

(e)  $1593 \div 41$ 

We round off 1593 to the nearest 100 = 1600We round off 41 to the nearest 10 = 40Now, the estimated quotient  $= 1600 \div 40$ = 40401600

$$-160$$
  
00

(f)  $1812 \div 33$ 

We round off 1812 to the nearest 100 = 1800We round off 33 to the nearest 10 = 30Now the estimated quotient  $= 1800 \div 30$  $30 \overline{)1800}$  $-\underline{180}$  $00 \overline{)00}$ 

(g) 2125÷22

We round off 2125 to the nearest 100 = 2100We round off 22 to the nearest 10 = 20Now, the estimated quotient  $= 2100 \div 20$ 105 $20 \overline{) 2100}$ -20100-1000

(h) 3980÷18

We round off 3980 to the nearest 1000 = 4000We round off 18 to the nearest 10 = 20Now, the estimated quotient  $= 4000 \div 20$  $2 0 \sqrt{\frac{200}{4000}} = 200$  $-\frac{40}{-000}$ Exercise 6.5

## Solve the given word problems :

1. The number of balloons = 1008The number of bunches that were made = 36So, the number of balloons in 1 bunch =  $1008 \div 36$ 

$$\begin{array}{r}
\frac{28}{36} = 28 \\
\frac{-72}{288} \\
\frac{-288}{0}
\end{array}$$

Thus, there are 28 balloons in each bunch.

2. The number of seats in the stadium = 1440The number of rows of seats =48So, the number of seats in 1 row  $= 1440 \div 48$ = 3030 48) 1448 -1440.0 3. The total amount of sugar  $=4158 \, \text{kg}$ The number of bags filled with sugar = 42 So, the amount of sugar in 1 bag  $=(4158 \div 42)$  kg =99 kg99 42) 4158 -378 378 -378 0 Thus, the amount of sugar in each bag is 99 kilogram.

4. The total length of ribbon = 4590 mThe number of rolls of ribbon = 18So, the length of ribbon in 1 roll  $= (4590 \div 18) \text{ m}$ 

$$\begin{array}{r} 255 \\ \hline 255 \\ \hline -36 \\ \hline 99 \\ \hline -90 \\ \hline 0 \\ \hline \end{array} = 255 \,\mathrm{m}$$

Thus, the length of ribbon in each roll is 255 metre. 459

- 5. The money distributed by bunny = 7344 1 6) 7 3 44 The number of friends = 16 -64So, the money received by 1 friend =  $(7344 \div 16)$  9 4 = 459 -80Thus, the money received by each friend is 459. No money is left with Bunny. -144
- 6. The number of cakes sold by Goodies Bakery in the month of July = 7254

The number of days in the month of July = 31 So, the number of cakes sold each day = 7254 ÷ 31 2 3 4= 234 $3 1 \sqrt{7254}$  $\frac{-62}{105}$  $\frac{-93}{124}$ 

 $\frac{-124}{0}$ 

Thus, 234 cakes were sold each day.

7. The money collected by Ravi for Teacher's day celebration = 1000

The number of students in his class = 50  
So, the money contributed by 1 student = 
$$(1000 \div 50)$$
  
 $20$   
 $50 \overline{)1000}$   
 $-100$   
 $05$ 

Thus, each student contributed ` 20.



8. The number of flower pots =`8016 The number of rows of flower pots =`48 So, the number of flower pots in 1 row = 8016  $\div$  48 =`167

$$\begin{array}{r}
167\\
48 \overline{)8016}\\
\underline{-48}\\
321\\
\underline{-288}\\
336\\
\underline{-336}\\
0\end{array}$$

Thus, there were 167 flower pots in each row.

9. The cost of boxes of sweet bought by Mrs Madhu = 3553The number of boxes of sweet = 17

So, the cost of 1 box of sweet = `(3553 ÷ 17)  
= `209  
$$17\overline{\smash{\big)}3553}$$
  
= `209  
 $\frac{-34}{153}$   
 $-153$   
0

Thus, the cost of each box of sweet was 209.



Frame two different word problems for each of the following:

- (a)  $1440 \div 15$ 
  - (i) A king had 1440 horse-riders in his army. He divided them into 15 troops. How many horseriders were there in each troop?
  - (ii) There were 1440 soldiers in 15 barracks of army. How many soldiers were there in each barrack?
- (b)  $1332 \div 18$ 
  - (i) 1332 toffees are distributed among 18 children equally. How much toffees does each child get?
  - (ii) There were 1332 student in a school in 18 sections of classes. If each section held equal number of students, how many students were there in each section?
- (c)  $2622 \div 23$ 
  - (i) There are 23 floors in huge building. Each floor has equal number of flats. If there are totally 2622 flats in the building, how many flats are there on each floor?
  - (ii) A famous doctor checked 2622 patients in 23 days. How many patients he checked per day?
- (d)  $2244 \div 34$ 
  - (i) A fruit-seller sells 2244 apples in 34 days. How many apples he sells in a day?
  - (ii) An examiner checked 2244 answer-sheets in 34 days. How many answer-sheets he checked per day?
- (e) 2378÷29
  - (i) The total money collected from 29 shopkeepers for tax was 2378. Find out the amount paid by each shopkeeper.

- (ii) 29 books has equal number of pages. If the total number of pages are 2378. How many pages are there in each book.
- (f)  $5400 \div 40$ 
  - (i) 5400 examinees sit in 40 rooms in an examination. If the number of examinees in each room is equal. How many examinees sits in each room?
  - (ii) Mr. Ritesh distributed 5400 calendars to his 40 distributers. How many calendars did each distributer get?

- 1. Write division facts for the given multiplication facts :
  - (a)  $4 \times 2 = 8$ **Division facts :**  $8 \div 2 = 4, 8 \div 4 = 2$ (b)  $7 \times 6 = 42$ **Division facts :**  $42 \div 7 = 6, 42 \div 6 = 7$
  - (c)  $5 \times 10 = 50$ **Division facts :**  $50 \div 5 = 10, 50 \div 10 = 5$ (d)  $9 \times 4 = 36$ 
    - **Division facts:**  $36 \div 9 = 4, 36 \div 4 = 9$
- Divide and check your answer : 2. (a)  $4867 \div 6$

Thus

Chec

Thus

Thus

$$\begin{array}{c} 811\\ \hline 6 & 4867\\ \hline -48\\ & 06\\ \hline -6\\ & 07\\ \hline -6\\ 1 \end{array}$$
Quotient = 811  
Remainder = 1

**Checking :** (By the fact : Dividend = (Quotient  $\times$  divisor) + Remainder)  $4967 - (911 \times 6) + 1$ 

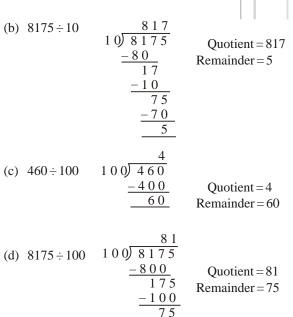
Thus the division is correct.  
(b) 
$$83 \div 17$$
  $17 \sqrt[]{83}$  Quotient = 4  
 $\frac{-68}{15}$  Remainder = 15  
Checking:  $83 = (4 \times 17) + 15$   
 $= 68 + 15$   
 $= 83$   
Thus the division is correct.  
(c)  $314 \div 76$   $7 6 \sqrt[]{4}$  Quotient = 4  
 $\frac{-304}{10}$  Quotient = 4  
Remainder = 10  
Checking:  $314 = (4 \times 76) + 10$   
 $= 304 + 10$   
 $= 314$   $42 \sqrt{5292}$   
Thus the division is correct.  
(d)  $5292 \div 42$  Quotient = 126  
Remainder = 0  
 $\frac{-84}{252}$ 



<b>Checking:</b> $5292 = (126 \times 42) + 0$ = $5292 + 0$ = $5292$ Thus the division is correct.	$ \begin{array}{r} 126 \\ \times 42 \\ 252 \\ + 5040 \end{array} $
(e) $841 \div 2$ $2 ) 841 = -8  -8  04  -4  01 Checking: 841 = (420 \times 2) + 1 = 840 + 1 = 841$	$\overline{5292}$ Quotient = 420 Remainder = 1
Thus the division is correct. (f) $63 \div 34$ $34\sqrt{63}$ -34 29	Quotient = 1 Remainder = 29
Checking: $63 = (1 \times 34) + 29$ = $34 + 29$ = $63$ Thus the division is correct. (g) $8016 \div 24$ $24 \overline{) 8016}$ -72 81 -72 96 -96 0	Quotient = 334 Remainder=0
Checking: $8016 = (334 \times 24) + 0$ = $8016 + 0$ = $8016$ Thus the division is correct. (h) $9167 \div 47$ $47) \overline{9167}$ -47 -47 446 -423 237 -235 2 Checking: $9167 = (195 \times 47) + 2$ = $9165 + 2$	$334$ $\times 24$ $1336$ $+ 6680$ $\underline{8016}$ Quotient = 195 Remainder = 2
= 9165 + 2 $= 9167$ Thus the division is correct.	

### 3. Find the quotient and the remainder :

(a)  $460 \div 10$  46 10) 460 -40 60 -60 0Quotient = 46 Remainder = 0



4. Dhruv took to solve 12 division problems = 84 min So, he took to solve 1 division problem =  $(84 \div 12)$  min  $12\sqrt{84}$  = 7 min -84<u>0</u>

Thus, Dhruv took 7 minutes to solve one problem.

5. For 20, I can get = 1 note of 20 rupees So, for `920, I can get =  $(920 \div 20)$  notes of 20 rupees  $\frac{46}{20\sqrt{920}} = 46$  notes of 20 rupees

$$\frac{-80}{120} \\
 \frac{-120}{0}$$

Thus, i can get 46 notes of 20 rupees for `920.

6. The number of bottles the shopkeeper wants to pack = 5064The capacity of 1 carton =67 bottles So, 5064 bottles can be packed in ( $5064 \div 67$ ) cartons = 75 cartons and 39 bottles will be left.

	75
67)5	064
_ 4	69
	374
-	-335
	39

Thus, 75 cartons will be required and 39 bottles will be left.



## Factors and multiples



## 1. Find the factors through multiplication : (a) $21:1\times21=21$ , $3\times7=21$ The factors of 21 are 1, 3, 7 and 21.

- (b)  $16: 1 \times 16 = 16$ ,  $2 \times 8 = 16$ ,  $4 \times 4 = 16$ The factors of 16 are 1, 2, 4, 8 and 16.
- (c)  $42: 1 \times 42 = 42$ ,  $2 \times 21 = 42$ ,  $3 \times 14 = 42$ ,  $6 \times 7 = 42$ The factors of 42 are 1, 2, 3, 6, 7, 14, 21 and 42.
- (d)  $36: 1 \times 36 = 36$ ,  $2 \times 18 = 36$ ,  $3 \times 12 = 36$ ,  $4 \times 9 = 36$ ,  $6 \times 6 = 36$ The factors of 36 are 1, 2, 3, 4, 6, 9, 12, 18, and 36.
- 2. Find the factors through division :
  - (a)  $14: 14 \div 1 = 14$ ,  $14 \div 2 = 7$ The factors of 14 are 1, 2, 7 and 14.
  - (b)  $28: 28 \div 1 = 28$ ,  $28 \div 2 = 14$ ,  $28 \div 4 = 7$ The factors of 28 are 1, 2, 4, 7, 14 and 28
  - (c)  $30: 30 \div 1 = 30$ ,  $30 \div 2 = 15$ ,  $30 \div 3 = 10$ ,  $30 \div 5 = 6$
  - The factors of 30 are 1, 2, 3, 5, 6, 15 and 30. (d)  $17: 17 \div 1 = 17$
  - The factors of 17 are 1 and 17.

## 3. Is 4 is a factor of 56?

7

Since remainder is 0, 4 is a factor of 56.

$$\begin{array}{r}
 1 4 \\
 4 \overline{\smash{\big)}} 5 6 \\
 -4 \\
 \overline{16} \\
 -1 6 \\
 \overline{0}
\end{array}$$

- 4. Find the common factors of the following :
  - (a) 14 and 36 Factors of  $14 \rightarrow 1, 2, 7$  and 14. Factors of  $36 \rightarrow 1, 2, 3, 4, 6, 9, 12, 18$  and 36. The common factors of 14 and 36 are 1 and 2.
  - (b) 35 and 70 Factors of 35 →1, 5, 7 and 35. Factors of 70 → 1, 2, 5, 7, 10, 14, 35 and 70. Therefore the common factors of 35 and 70 are 1, 5, 7 and 35.

## 5. Write 'T' for true and 'F' for false :

(a) 3 is a factor of 27.

3) 5 6  
$$-27$$
  
6

Remainder is 0. So, 3 is a factor of 27. Answer 'T'

- (b) 0 is a factor of 5.  $5 \div 0 =$  Not possible. So, 0 is not a factor of 5. Answer : 'F'
- (c) 1 is a factor of every number. Answer is 'T'.

(d) 2, 3,4, 5, are factors of 30. Factors of 30 → 1 × 30 = 30, 2 × 15 = 30, 3 × 10 = 30, 5 × 6 = 30 → 1, 2, 3, 5, 6, 10, 15 and 30. So, 2, 3, 4, 5 are not factors of 30. Answer : 'F'
(e) 7 is a common factor of 28 and 53. Factors of 28 → 1 × 28 = 28, 2 × 14 = 28, 4 × 7 = 28 → 1, 2, 4, 7, 14 and 28. Factors of 53 → 1 × 53 = 53 → 1 and 53. Comparing the factors, 7 is not a common factor of 28 and 53. Answer : 'F'

## 1. Find the first four multiples of these numbers :

- (a)  $3=3\times 1=3$ ,  $3\times 2=6$ ,  $3\times 3=9$ ,  $3\times 4=12$ The first four multiples of 3 are 3, 6, 9 and 12.
- (b)  $8=8\times 1=8$ ,  $8\times 2=16$ ,  $8\times 3=24$ ,  $8\times 4=32$ The first four multiples of 8 are 8, 16, 24 and 32.
- (c)  $7=7\times 1=7$ ,  $7\times 2=14$ ,  $7\times 3=21$ ,  $7\times 4=28$ The first four multiples of 7 are 7, 14, 21 and 28.
- (d)  $12=12\times 1=12$ ,  $12\times 2=24$ ,  $12\times 3=36$ ,  $12\times 4=48$ The first four multiples of 12 are 12, 24, 36 and 48.

## 2. Is 54 a multiple of 4?

		I	3	
4)		5	4	
	_	4		
		1	4	
	_	1	2	
			2	

Remainder is not 0. So, 54 is not a multiple of 4. Answer : 'No'

## 3. Find the 7th multiple of 11.

7th multiple of  $11=11 \times 1=11$ ,  $11 \times 2=22$ ,  $11 \times 3=33$ ,  $11 \times 4=44$ ,  $11 \times 5=55$ ,  $11 \times 6=66$ ,  $11 \times 7=77$ The 7th multiple of 11 is 77.

### 4. Write the first four common multiples of the following : (a) 2 and 5

2 and 5 Multiples of  $2 \rightarrow 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24$ 26, 28, 30, 32, 34, 36, 38, 40. Multiples of  $5 \rightarrow 5, 10, 15, 20, 25, 30, 35, 40, 45, 50$ . The first four common multiples of 2 and 5 are 10, 20, 30 and 40.

- (b) 8 and 12
  - Multiples of  $8 \rightarrow 8, 16, 24, 32, 40, 48, 56, 64, 72, 80, 88, 96$  ......

Multiples of  $12 \rightarrow 12, 24, 36, 48, 60, 72, 84, 96$  ...... The first four common multiples of 8 and 12 are 24, 48, 72, and 96.

5. Write 'T' for true and 'F' for false :

(a) 49 is a multiple of 3.

3) 49



remainder is not 0. So, 49, is not a multiple of 3. Answer : 'F'



- (b) 72 is the 8th multiple of 9.
  Multiple of 9 → 9, 18, 27, 36, 45, 54, 63, 72.....
  72 is the 8th multiple of 9. Answer 'T'.
- (c) Every multiple of a number is smaller than the number Answer: 'F'
- (d) 6, 12, 18, 24 are some of the common multiples of 2 and 3.
  Multiples of 2 → 2, 4, 6, 8, 10, 12, 14. 16, 18, 20, 22, 24 ....
  Multiples of 3 → 3, 6, 9, 12, 15, 18, 21, 24 .....

Comparing the multiples : 6, 12, 15, 18, 24 are some of the common multiple of 2 and 3. Answer 'T'.

(e) 17 is a multiples of 17. By the fact  $17 \times 1 = 17$ , 17 is a multiple of 17. Answer 'T'.

1. Is 47 an even number?

$$23 \\ 2 47 \\ -4 \\ 07 \\ -6 \\ 1$$

Since remainder is not 0, 2 is not a factors of 47. Therefore, 47 is not an even number. It is an odd number. Answer : **No**.

2. Is 59 an odd number?

$$2) \overline{59}$$

$$-4$$

$$\overline{19}$$

$$-18$$

$$1$$

Since remainder is not 0, 59 is not a multiple of 2. Therefore 59 is an odd number. Answer *Yes*.

3. Put a tick (✓) for an even number and cross (X) for an odd number :

(a)  $23 \times$  (b)  $16 \checkmark$  (c)  $45 \times$  (d)  $144 \checkmark$ (e)  $121 \times$  (f)  $220 \checkmark$  (g)  $251 \times$  (h)  $9 \times$ 

[**Hint** : Divide the number by 2. If remainder is 0, the number is even and, if remainder is not 0, the number is odd]

- 1. List all the factors of :
  - (a)  $72 \rightarrow 72 \div 1 = 72$ ,  $72 \div 2 = 36$ ,  $72 \div 3 = 24$ ,  $72 \div 4 = 18$ ,  $72 \div 6 = 12$ ,  $72 \div 8 = 9$ . The factors of 72 am 1, 2, 2, 4, 6, 8, 0, 12, 18, 24, 26, 6

The factors of 72 are 1, 2, 3, 4, 6, 8, 9, 12, 18, 24, 36, and 72. (b)  $96 \rightarrow 96 \div 1 = 96$ ,  $96 \div 2 = 48$ ,

 $96 \div 3 = 32,$   $96 \div 4 = 24,$ 

 $96 \div 6 = 16$ ,  $96 \div 8 = 12$ .

The factors of 96 are 1, 2, 3, 4, 6, 8, 12, 16, 24, 32, 48, and 96.

(c)  $91 \rightarrow 91 \div 7 = 13$ ,  $91 \div 13 = 7$ The factors of 91 are 1, 7, 13 and 91.

## 2. Is 24 is a factors of 120?

$$5 \\ 24 \overline{)120} \\ -120$$

 $\begin{array}{c} \hline 1 \ 2 \ 0 \\ \hline 0 \\ \hline \end{array}$  Since remainder is 0, 24 is a factor of 120.  $\begin{array}{c} -1 \ 2 \ 0 \\ \hline 0 \\ \hline \end{array}$  Answer : *Yes* 

## 3. Write the common factors of :

(a) 20 and 48

Factors of  $20 \rightarrow 20 \div 1 = 20, 20 \div 2 = 10, 20 \div 4 = 5$  $\rightarrow 1, 2, 4, 5, 10 \text{ and } 20.$ 

Factors of  $48 \rightarrow 48 \div 1 = 48$ ,  $48 \div 2 = 24$ ,  $48 \div 3 = 16$ ,  $48 \div 4 = 12$ ,  $48 \div 6 = 8$ 

$$\rightarrow 1, 2, 3, 4, 6, 8, 12, 16, 24, 48$$

Comparing the multiples, the common factors 20 and 48 are 1, 2 and 4.

(b) 12 and 18

Factors of 
$$12 \rightarrow 12 \div 1 = 12$$
,  $12 \div 2 = 6$ ,  $12 \div 3 = 4$   
 $\rightarrow 1, 2, 3, 4, 6$ , and 12.

Factors of 
$$18 \to 18 \div 1 = 18$$
,  $18 \div 2 = 9$ ,  $18 \div 3 = 6$ 

$$\rightarrow 1, 2, 3, 6, 9, 18$$

comparing the multiples, the common factors of 12 and 18 are 1, 2, 3 and 6.

## 4. Find the first five multiples of :

- (a)  $17 \rightarrow 17 \times 1 = 17$ ,  $17 \times 2 = 34$ ,  $17 \times 3 = 51$ ,  $17 \times 4 = 68$ ,  $17 \times 5 = 85$ The first five multiples of 17 are 17, 34, 51, 68 and 85.
- (b)  $11 \rightarrow 11 \times 1 = 11$ ,  $11 \times 2 = 22$ ,  $11 \times 3 = 33$ ,  $11 \times 4 = 44$ ,  $11 \times 5 = 55$ The first five multiples of 11 are 11, 22, 33, 44 and 55.
- 5. The fifth multiple of  $3 \rightarrow 3 \times 5 = 15$ The third multiple of  $5 \rightarrow 5 \times 3 = 15$ Therefore the fifth multiple of 3 is equal to the third multiple of 5. Answer : **Yes.**

## 6. Write the first two common multiples of :

(a) 12 and 30 Multiples of  $12 \rightarrow 12 \times 1 = 12$ ,  $12 \times 2 = 24$ ,  $12 \times 3 = 36$ ,  $12 \times 4 = 48$ ,  $12 \times 5 = 60$ ,  $12 \times 6 = 72$ ,  $12 \times 7 = 84$ .  $12 \times 8 = 96$ ,  $12 \times 9 = 108$ ,  $12 \times 10 = 120.$ Multiples of  $30 \rightarrow 30 \times 1 = 30$ ,  $30 \times 2 = 60$ ,  $30 \times 3 = 90$ ,  $30 \times 4 = 120$ Therefore the first two common multiples of 12 and 30 are 60 and 120. (b) 9 and 12

Multiples of  $9 \rightarrow 9 \times 1 = 9$ ,  $9 \times 2 = 18$ ,  $9 \times 3 = 27$ ,  $9 \times 4 = 36$ .  $9 \times 5 = 45$ ,  $9 \times 6 = 54$ ,  $9 \times 7 = 63$ ,  $9 \times 8 = 72$  .... Multiples of  $12 \rightarrow 12 \times 1 = 12$ ,  $12 \times 2 = 24$ ,  $12 \times 3 = 36$ .  $12 \times 4 = 48$ ,  $12 \times 5 = 60$ ,  $12 \times 6 = 72$ .....

2. Draw figures to represent the given fractions :

Therefore the first two common multiples of 9 and 12 are 36 and 72.

- 7. Answer: Yes.
- 8. Is 43 an even number? If not, then what kind of a number is it?

21 2) 43 -4	Since remainder is not 0, 43 is not a multiple of 2. So, 43 is not an even number. Therefore, it is an odd number. Answer : <b>No.</b>
03	it is an odd number. Answer . 190.
-2	
1	

9. Write 'T' for true or 'F' for false :

(a) Answer: 'F'

(b) 81 is a multiple of 3.

Since remainder is 0, 81 is a multiple of 3.

$$\begin{array}{r}
 \frac{27}{3 \overline{\smash{\big)}\ 81}} \\
 \underline{\phantom{0}} \\
 0 \\
 \end{array}$$

(c)  $2, 5, \overline{10, 25}$  are factors of 50. Factors of  $50 \rightarrow 50 \div 1 = 50, 50 \div 2 = 25, 50 \div 5 = 10$ Therefore 2, 5, 10, 25, are factors of 50. Answer 'T'.

Answer. 'T'

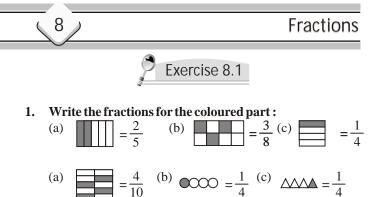
(d) 11 is a common factors of 55 and 99. Factors of  $55 \rightarrow 55 \div 1 = 55$ ,  $55 \div 5 = 11$ Factors of  $99 \rightarrow 99 \div 1 = 99$ ,  $99 \div 3 = 33$ ,  $99 \div 9 = 11$ 

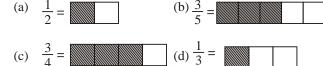
Therefore, 11 is a common factor of 55 and 99. Answer 'T'.

(e) 12, 24, 36, 48 are some of the common multiples of 4 and 6.

Multiples of  $4 \rightarrow 4 \times 1 = 4$ ,  $4 \times 2 = 8$ ,  $4 \times 3 = 12$ ,  $4 \times 4 = 16$ ,  $\rightarrow 4 \times 5 = 20$ ,  $4 \times 6 = 24$ ,  $4 \times 7 = 28$ ,  $4 \times 8 = 32$ ,  $4 \times 9 = 36$ ,  $4 \times 10 = 40$ ,  $4 \times 11 = 44$ ,  $4 \times 12 = 48$  ... Multiples of  $6 \rightarrow 6 \times 1 = 6$ ,  $6 \times 2 = 12$ ,  $6 \times 3 = 18$ ,  $6 \times 4 = 24$ ,  $6 \times 5 = 30$ ,  $6 \times 6 = 36$ ,  $6 \times 7 = 42$ ,  $6 \times 8 = 48$ 

Comparing the multiples; 12, 24, 36, 48 are some the common multiples of 4 and 6. Answer : 'T'.





3. Complete the table :

SI. No.	Numerator	Denominator	Fractions
(a)	7	10	$\frac{7}{10}$
(b)	8	15	$\frac{8}{15}$
(c)	12	23	$\frac{\frac{8}{15}}{\frac{12}{23}}$
(d)	9	25	$\frac{9}{25}$
(e)	24	29	$\frac{9}{25}$ $\frac{24}{29}$ $\frac{36}{47}$
(f)	36	47	$\frac{36}{47}$

4. (d)  $\frac{3}{5}$ 

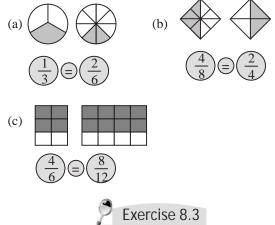
51



1. Do yourself.

2.	(a)	$\frac{1}{3} = \frac{2}{6}$	(b) $\frac{4}{8} = \frac{2}{4}$	(c)	$\frac{2}{6} = \frac{1}{3}$
	(d)	$\frac{3}{4} = \frac{6}{8}$	(e) $\frac{2}{3} = \frac{4}{6}$	(f)	$\frac{1}{3} = \frac{2}{6}$

3. Colour the following to show equivalent fractions :



- 1. Which of the following sets to fractions are like fractions and unlike fractions :
  - (a)  $\frac{2}{6}, \frac{4}{6}$  Denominators in these fractions are same. Therefore, these are like fractions.
  - (b)  $\frac{1}{8}, \frac{2}{8}, \frac{4}{8} \rightarrow$  Denominators in these fractions are same. Therefore, these are like fractions.
  - (c)  $\frac{2}{5}, \frac{3}{5}, \frac{4}{6} \rightarrow$  Denominators in these fractions are not same. Therefore these are unlike fractions.

(d) 
$$\frac{2}{4}, \frac{2}{5}, \frac{2}{6} \rightarrow$$
 Denominators in these fractions are not same. Therefore, these are unlike fractions.

- (e)  $\frac{3}{7}, \frac{2}{7}, \frac{5}{7} \rightarrow$  Denominators in these fractions are same. Therefore, these are like fractions.
- (f)  $\frac{4}{5}, \frac{4}{6}, \frac{4}{8} \rightarrow$  Denominators in these fractions are not same. Therefore these are unlike fractions.

(g) 
$$\frac{2}{9}, \frac{5}{9}, \frac{4}{9}, \frac{1}{9} \rightarrow \text{Denominators in these fractions are same. Therefore, these are like fractions.}$$

- (h)  $\frac{1}{4}, \frac{1}{6}, \frac{1}{9} \rightarrow$  Denominator in these fractions are not same. Therefore, these are unlike fractions.
- 2. Circle the smaller fraction in each of the following : (a)  $\begin{pmatrix} 7\\ 12 \end{pmatrix} \frac{9}{12}$  (b)  $\frac{7}{8} \begin{pmatrix} 1\\ 8 \end{pmatrix}$  (c)  $\begin{pmatrix} 19\\ 32 \end{pmatrix} \frac{29}{32}$

(d)	$\frac{18}{19}\left(\frac{17}{19}\right)$	(e)	$\frac{23}{25} \underbrace{\begin{array}{c} 21\\ 25 \end{array}}$	(f)	$\frac{13}{14} \underbrace{11}_{14}$
-----	-------------------------------------------	-----	-------------------------------------------------------------------	-----	--------------------------------------

[Hint : if the denominators are same, the fractions with the greater numerators will be greater fractions.]

3. Circle the greater fractions in each of the following :

(a) $\frac{13}{24} \begin{pmatrix} 22\\ 24 \end{pmatrix}$	(b)	$\left(\begin{array}{c} \frac{33}{41} \\ \frac{31}{41} \end{array}\right) \frac{31}{41}$	(c) $\frac{4}{9}\left(\frac{5}{9}\right)$
(a) $\frac{5}{17} \left( \frac{9}{17} \right)$	(b)	$\frac{11}{15}\left(\frac{13}{15}\right)$	(c) $\frac{1}{2}\left(\frac{2}{2}\right)$

- 4. Compare the following fractions by putting the sign >, < or = :
  - (a)  $\frac{4}{5} > \frac{3}{5}$  (b)  $\frac{7}{10} > \frac{5}{10}$  (c)  $\frac{4}{9} = \frac{4}{9}$ (d)  $\frac{9}{16} < \frac{15}{16}$  (e)  $\frac{11}{18} < \frac{13}{18}$  (f)  $\frac{10}{20} < \frac{11}{20}$ (g)  $\frac{20}{23} < \frac{21}{23}$  (h)  $\frac{6}{6} > \frac{1}{6}$  (i)  $\frac{27}{37} > \frac{17}{37}$
- 5. Arrange and write the following fractions in ascending order:

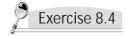
The denominators in all these fractions are the same. So, these are like fractions. Arranging from the smallest to the biggest or in ascending order, the fractions are as :

- (a)  $\frac{2}{10}, \frac{5}{10}, \frac{7}{10}, \frac{9}{10}$ (b)  $\frac{3}{19}, \frac{9}{19}, \frac{16}{19}, \frac{18}{19}$ (c)  $\frac{1}{12}, \frac{3}{12}, \frac{9}{12}, \frac{11}{12}$ (d)  $\frac{1}{8}, \frac{2}{8}, \frac{5}{8}, \frac{7}{8}$
- (e)  $\frac{4}{15}, \frac{9}{15}, \frac{11}{15}, \frac{14}{15}$  (f)  $\frac{1}{29}, \frac{3}{29}, \frac{9}{29}, \frac{11}{29}$

## 6. Arrange and write the following fractions in descending order :

The denominators in all these fractions are the same. So, these are like fractions. Arranging from the biggest to the smallest or in descending order, the fractions are as :

(a)	$\frac{14}{15}, \frac{11}{15}, \frac{9}{15}, \frac{4}{15}$	(b)	$\frac{11}{29}, \frac{9}{29}, \frac{3}{29}, \frac{1}{29}$
(c)	$\frac{6}{7}, \frac{5}{7}, \frac{3}{7}, \frac{1}{7}$	(d)	$\frac{17}{18}, \frac{15}{18}, \frac{8}{18}, \frac{5}{18}$
(e)	$\frac{20}{22}, \frac{17}{22}, \frac{11}{22}, \frac{11}{22}$	(f)	$\frac{9}{13}, \frac{7}{13}, \frac{3}{13}, \frac{1}{13}$



- 1. Add the given fractions : (a)  $\frac{1}{4} + \frac{2}{4} = \frac{1+2}{4} = \frac{3}{4}$  (b)  $\frac{3}{7} + \frac{3}{7} = \frac{3+3}{7} = \frac{6}{7}$ (c)  $\frac{8}{15} + \frac{5}{15} = \frac{8+5}{15} = \frac{13}{15}$  (d)  $\frac{11}{20} + \frac{6}{20} = \frac{11+6}{20} = \frac{17}{20}$ (e)  $\frac{21}{35} + \frac{10}{35} = \frac{21+10}{35} = \frac{31}{35}$  (f)  $\frac{7}{19} + \frac{8}{19} = \frac{7+8}{19} = \frac{15}{19}$ (g)  $\frac{23}{47} + \frac{15}{47} + \frac{5}{47} = \frac{23+15+5}{47} = \frac{43}{47}$ (h)  $\frac{11}{24} + \frac{9}{24} + \frac{3}{24} = \frac{11+9+3}{24} = \frac{23}{24}$ (i)  $\frac{22}{50} + \frac{11}{50} + \frac{10}{50} = \frac{22+11+10}{50} = \frac{43}{50}$
- 2. Subtract the given fractions :
- (a)  $\frac{10}{12} \frac{7}{12} = \frac{10-7}{12} = \frac{3}{12} = \frac{1}{4}$  (b)  $\frac{19}{21} \frac{11}{21} = \frac{19-11}{21} = \frac{8}{21}$ (c)  $\frac{23}{28} - \frac{15}{28} = \frac{23-15}{28} = \frac{8}{28} = \frac{2}{7}$ (d)  $\frac{27}{32} - \frac{18}{32} = \frac{27-15}{32} = \frac{9}{32}$ (e)  $\frac{34}{44} - \frac{26}{44} = \frac{34-26}{44} = \frac{8}{44}$ (f)  $\frac{17}{38} - \frac{9}{38} = \frac{17-9}{38} = \frac{8}{38} = \frac{4}{19}$ (g)  $\frac{15}{17} - \frac{8}{17} = \frac{15-8}{17} = \frac{7}{17}$ (h)  $\frac{37}{39} - \frac{29}{39} = \frac{37-29}{39} = \frac{8}{39}$  **3. Fill in the blanks using '+' or '-'sign :** 
  - (a)  $\frac{8}{15} \frac{1}{15} = \frac{7}{15}$  (b)  $\frac{5}{9} + \frac{3}{9} = \frac{8}{9}$

(c) 
$$\frac{13}{29} + \frac{8}{29} = \frac{21}{29}$$
 (d)  $\frac{7}{13} + \frac{5}{13} = \frac{12}{13}$   
(e)  $\frac{24}{31} - \frac{9}{31} = \frac{15}{31}$  (f)  $\frac{31}{36} - \frac{19}{36} = \frac{12}{36}$   
Exercise 8.5

## 1. Find the following fractions :

(a)  $\frac{1}{5}$  of 40 We first divide 40 by  $5 \rightarrow 40 \div 5 = 8$ Then, we multiply 8 by  $1 \rightarrow 8 \times 1 = 8$ So,  $\frac{1}{5}$  of 40 = 8

(b) 
$$\frac{3}{4}$$
 of 20  
We first divide 2

We first divide 20 by  $4 \rightarrow 20 \div 4 = 5$ Then, we multiply  $5 \times 3 \rightarrow 15$ So,  $\frac{3}{2}$  of 20 = 15

(c) 
$$\frac{5}{8}$$
 of 72

We first divide 72 by  $8 \rightarrow 72 \div 8 = 9$ Then, we multiply 9 by  $5 = 9 \times 5 \rightarrow 45$ 

So, 
$$\frac{5}{8}$$
 of 72 = 45

(d) 
$$\frac{7}{12}$$
 of 60

We first divide 60 by  $12 = 60 \div 12 = 5$ Then we multiply 5 by  $7 = 5 \times 7 = 35$ 

So, 
$$\frac{7}{12}$$
 of 60=35

(e) 
$$\frac{9}{11}$$
 of 88

We first divide 88 by  $11 \rightarrow 88 \div 11 = 8$ Then we multiply 8 by  $9 \rightarrow 8 \times 9 = 72$ 

So, 
$$\frac{9}{11}$$
 of 88=72

(f) 
$$\frac{0}{7}$$
 of 70

(g)

1

We first divide 70 by  $7 \rightarrow 70 \div 7 = 10$ Then we multiply 10 by  $6 \rightarrow 10 \times 6 = 60$ 

So, 
$$\frac{6}{7}$$
 of 70 = 60  
 $\frac{3}{9}$  of 81

We first divide 81 by  $9 \rightarrow 81 \div 9 = 9$ Then, we multiply 9 by  $3 \rightarrow 9 \times 3 = 27$ 

So, 
$$\frac{3}{9}$$
 of 81 = 27

(h) 
$$\frac{6}{11}$$
 of 99

We first divide 99 by  $11 \rightarrow 99 \div 11 = 9$ Then we multiply 9 by  $6 \rightarrow 54$ 

So, 
$$\frac{6}{11}$$
 of 99 = 54

- (a) Find  $\frac{4}{7}$  of 350 g We first divide 350 by  $7 \rightarrow 350 \div 7 = 50$ Then we multiply 50 by  $4 \rightarrow 50 \times 4 = 200$ So,  $\frac{4}{7}$  of 350 g = 200 g
- (b) To find the number of broken eggs, we find,  $\frac{2}{9}$  of

45 eggs

9

We first divide 45 by  $9 \rightarrow 45 \div 9 = 5$ Then we multiply 5 by  $2 \rightarrow 5 \times 2 = 10$ 

So, 
$$\frac{2}{9}$$
 of 45 eggs = 10 eggs

So, 10 eggs had broken. Number of eggs left = (45 - 10) = 35**Answer :** 10 eggs broken and 35 eggs are left.

- (c) To find the distance that Amit walked, we find, 1/4 of 12 km.
  We first divide 12 by 4 → 12 ÷ 4 = 3 Then we multiply 3 by 1 → 3 × 1 = 3 So, Amit walked 3 km.
  Answer : The distance that Amit walked is 3 km.
- (d) To find the number of notebooks that were colleted, we find,  $\frac{3}{5}$  of the 40 notebooks.

We first divide 40 by  $5 \rightarrow 40 \div 5 = 8$ Then we multiply 8 by  $3 \rightarrow 8 \times 3 = 24$ 

So, the teacher collected 24 notebooks.

Answer: 24 notebook were collected.

(e) To find the number of red colour balloons, we find  $\frac{3}{4}$  of 60 balloons.

First we divide 60 by  $4 \rightarrow 60 \div 4 = 15$ Then we multiply 15 by  $3 \rightarrow 15 \times 3 = 45$ So, the number of red colour balloons is 45. Now, the number of blue colour balloons = (60-45) = 15**Answer :** 45 red and 15 blue colour balloons are there in the room.

3. 
$$\frac{2}{5}$$
 of `125 is_____.

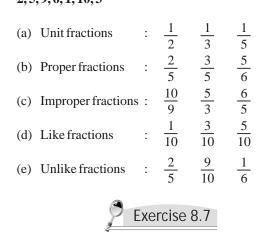
We first divide 125 by  $5 = 125 \div 5 = 25$ Then we multiply by  $2 = 25 \times 2 = 50$ **Answer (c) :** 50



(b), (c), (f), (h), (i) and (k) will be coloured in red and (a), (d), (e), (g) (j), and (l) will be coloured in blue.

Form at least 3 fractions of each of the following types 2. using the numbers given :

2, 5, 9, 6, 1, 10, 3



## 1. Whole parts of the given mixed fractions are :

- (b) 10, (c) 15, (a) 7, (d) 9.
- 2. Convert the following improper fractions into whole numbers or mixed fractions :
  - (a)  $\frac{7}{2}$ : We divide 7 by 2.

In division, quotient 3 is whole number, remainder 1 is numerator and denominator remains the same 2. Thus, the mixed fractions is  $3\frac{1}{2}$ .

- 6

3.

(b) 
$$\frac{14}{7}$$
: We divide 14 by 7.  
In the division quotient 2 is whole number.  
Therefore, answer is 2.  
(c)  $\frac{52}{8}$ : We divide 52 by 8.  
(c)  $\frac{52}{8}$ : We divide 52 by 8.

8) 52 -48 4In division, quotient 6 is whole number, remainder 4 is numerator and denominator remains the same 8.

Thus, the mixed fraction is  $6\frac{4}{8} = 6\frac{1}{2}$ 

(d) 
$$\frac{72}{8}$$
: We divide 72 by 8.  
In the division quotient 9 is whole  
number. Therefore, answer is 9.  
(e)  $\frac{100}{9}$ : We divide 100 by 9.  
In the division quotient 11 is whole  
number, remainder is numerator and  
denominator remains the same, 9.  
 $\frac{-72}{0}$   
 $\frac{-72}{0}$   
 $\frac{-72}{0}$   
 $\frac{-72}{0}$   
 $\frac{-9}{100}$ 

(e) 
$$\frac{100}{9}$$
 : We divide 100 by 9.

In the division quotient 11 is whole number, remainder is numerator and denominator remains the same, 9.

Thus, the mixed fraction is  $11\frac{1}{9}$ . 30

(f) 
$$\frac{39}{13}$$
: We divide 39 by 13.  
In the division, quotient 3 is  $\frac{-39}{0}$   
whole number.  
Therefore, answer is 3.

(g) 
$$\frac{0.5}{12}$$
: We divide 85 by 12.  
In the division, quotient 7 is

whole number, remainder 1 is

numerator and denominator remains the same, 12.

Thus the mixed fraction is 
$$7\frac{1}{12}$$
.  
(h)  $\frac{125}{15}$ : We divide 125 by 15.  
In the division, quotient 8 is whole number, remainder is numerator and denominator remains the same 15.  
Thus, the mixed fraction is  $8\frac{5}{15} = 8\frac{1}{3}$   
(i)  $\frac{120}{11}$ : We divide 120 by 11.  
In the division quotient 10 is  $\frac{-11}{10}$   
In the division quotient 10 is  $\frac{-11}{10}$   
In the division quotient 10 is  $\frac{-11}{10}$   
(j)  $\frac{19}{9}$ : We divide 19 by 9.  
In the division, quotient 2 is whole number, remainder 1 is numerator and denominator remains the same, 9.  
Thus, the mixed fractions is  $2\frac{1}{9}$ .  
**Convert the following mixed fractions into improper fractions:**  
(a)  $3\frac{2}{7}$ : First, we multiply the whole number 3 with

the denominator 7.  $3 \times 7 = 21$ Then, we add numerator 2 to the above

product. 21 + 2 = 23

The above sum 23 is the numerator and denominator remains the same, 7. Thus, improper fraction is  $\frac{23}{7}$ .

(b)  $1\frac{3}{5}$ : First, we multiple whole number 1 with the denominator 5.  $1 \times 5 = 5$ Then, we add numerator 3 to the above product. 5 + 3 = 8

> The above sum 8 is the numerator and denominator remains the same, 5.

Thus, the improper fraction is  $\frac{8}{5}$ .

(c)  $4\frac{7}{8}$ : First, we multiply the whole number 4 with the denominator 8.  $4 \times 8 = 32$ Then we add numerator 7 to the above product.

$$32 + 7 = 39$$

The above sum 39 is the numerator and denominator remains the same, 8.

Thus, the improper fraction is  $\frac{39}{8}$ .

12) 85



(d)  $5\frac{5}{11}$ : First we multiply the whole number 5 with the denominator 11.  $5 \times 11 = 55$ 

Then, we add numerator 5 to the above product. 55+5=60

The above sum 60 is the numerator and denominator remains the same, 11.

Thus, the improper fraction is  $\frac{60}{11}$ .

(e)  $10\frac{5}{9}$ : First we multiply the whole number 10 with the denominator 9.  $10 \times 9 = 90$ Then, we add numerator 5 to the above product. 90+5=90

The above sum 95 is the numerator and denominator remains the same, 9.

Thus, the improper fraction is 
$$\frac{95}{9}$$

(f)  $12\frac{8}{9}$ : First we multiply the whole number 12 with the denominator 9.  $12 \times 9 = 108$ 

Then, we add numerator 8 to the above product. 108 + 8 = 116

The above sum 116 is the numerator and denominator remains the same, 9.

Thus, the improper fraction is  $\frac{116}{2}$ .

(g) 8  $\frac{4}{15}$ : First we multiply the whole number 8 with the denominator 15. 8 × 15 = 120

Then, we add numerator 4 to the above product.

120 + 4 = 124

The above sum 124 is the numerator and denominator remains the same, 15.

Thus, the improper fraction is  $\frac{124}{15}$ .

(h)  $2\frac{11}{13}$ : First, we multiply the whole number 2 with the denominator 13.

Then, we add numerator 11 to the above product.

26 + 11 = 37

The above sum 37 is the numerator and denominator remains the same, 13.

Thus, the improper fraction is  $\frac{37}{13}$ .

(i)  $10\frac{4}{17}$ : First, we multiply the whole number 10 with the denominator 17.  $10 \times 17 = 170$ Then, we add numerator 4 to the above product. 170 + 4 = 174The above sum 174 is the numerator and

denominator remains the same, 17.

Thus, improper fraction is  $\frac{174}{17}$ 

(j)  $2\frac{12}{23}$ : First, we multiply the whole number 2 to the denominator 23.  $2 \times 23 = 46$ Then, we add numerator 12 to the above product. 46 + 12 = 58

The above sum 58 is numerator and denominator remains the same, 23.

Thus, the improper fraction is  $\frac{58}{23}$ 

Exercise 8.8

## Solve the following word problems :

1. Meera's mother gave her money = 1 (a whole)

She spent of it =  $\frac{2}{5}$ Money left with Meera =  $1 - \frac{2}{5} = \frac{5-2}{5} = \frac{3}{5}$ So,  $\frac{3}{5}$  of the money is left with Meera.

- 2. Smita used to make a napkin =  $\frac{1}{6}$  of the cloth. She used to make a dress =  $\frac{4}{6}$  of the cloth Totally she used  $\frac{1}{6} + \frac{4}{6} = \frac{1+4}{6} = \frac{5}{6}$  of the cloth. Therefore, Simta used  $\frac{5}{6}$  of the cloth. 3. Tina ate in the morning =  $\frac{1}{6}$  of the chocolate
- 3. Tina ate in the morning  $=\frac{1}{6}$  of the chocolate She ate in the evening  $=\frac{2}{6}$  of the chocolate Totally, she ate  $\frac{1}{6} + \frac{2}{6} = \frac{1+2}{6} = \frac{3}{6} = \frac{1}{2}$  of the chocolate.
- 4. Vikas read an Monday  $\frac{4}{9}$  of the book. He read on Tuesday  $\frac{3}{9}$  of the book.

So, he read more on Monday than Tuesday of the book.  

$$\frac{4}{9} - \frac{3}{9} = \frac{4-3}{9} = \frac{1}{9}$$

Vikas read  $\frac{1}{9}$  more on Monday than Tuesday.

5. The cost of camera  $=\frac{3}{7}$  of the money The cost of cellphone  $=\frac{2}{7}$  of the money

Difference between the cost of camera and the cost of cello phone  $\frac{3}{7} - \frac{2}{7} = \frac{3-2}{7} = \frac{1}{7}$ ; Therefore the camera costs  $\frac{1}{7}$  more than the cost of the cellphone.

6. Mohit has read  $\frac{1}{4}$  of 60 pages

$$= 1 \times (60 \div 4)$$
 pages

$$=1 \times 15 = 15$$
 pages

Therefore, Mohit has read 15 pages of the book.

7. The book has 55 pages. Sania has read 32 pages So, the number of pages left = 55 - 32 = 23 pages Here, 55 is denominator and 23 is numerator. Therefore  $\frac{23}{55}$  pages are left for Sania to read.



## Revision

- 1. Find out equivalent fraction of each of the following : (a)  $\frac{7}{8} = \frac{7 \times 2}{8 \times 2} = \frac{14}{16}$  an equivalent fractions of  $\frac{7}{8}$  is  $\frac{14}{16}$ 
  - (b)  $\frac{3}{4} = \frac{3 \times 2}{6 \times 2} = \frac{6}{8}$ ; an equivalent fraction of  $\frac{3}{4}$  is  $\frac{6}{8}$ .
  - (c)  $\frac{5}{6} = \frac{5 \times 2}{6 \times 2} = \frac{10}{12}$ ; an equivalent fraction of  $\frac{5}{6}$  is  $\frac{10}{12}$ .
  - (d)  $\frac{20}{35} = \frac{20 \times 2}{35 \times 2} = \frac{40}{70}$ ; an equivalent fraction of  $\frac{20}{35}$  is  $\frac{40}{70}$
  - (e)  $\frac{12}{20} = \frac{12 \times 2}{20 \times 2} = \frac{24}{40}$ ; an equivalent fraction of  $\frac{12}{20}$  is  $\frac{24}{40}$ .
  - (f)  $\frac{18}{21} = \frac{18 \times 2}{21 \times 2} = \frac{36}{42}$ ; an equivalent fraction of  $\frac{18}{21}$  is  $\frac{36}{42}$ .
- 2. Build equivalent fractions to the 5th place for each of the following:

(a) 
$$\frac{5}{9}, \left(\frac{5 \times 2}{9 \times 2}\right) = \frac{10}{18}, \left(\frac{5 \times 3}{9 \times 3}\right) = \frac{15}{27}, \left(\frac{5 \times 4}{9 \times 4}\right) = \frac{20}{36}, \left(\frac{5 \times 5}{9 \times 5}\right) = \frac{25}{45}$$
  
(b)  $\frac{9}{11}, \left(\frac{9 \times 2}{11 \times 2}\right) = \frac{18}{22}, \left(\frac{9 \times 3}{11 \times 3}\right) = \frac{27}{33}, \left(\frac{9 \times 4}{11 \times 3}\right) = \frac{36}{44}, \left(\frac{9 \times 5}{11 \times 5}\right) = \frac{45}{55},$ 

- 3. Change the following fractions into whole numbers :
  - (a)  $\frac{42}{6} = (42 \div 6) = 7$  (b)  $\frac{104}{13} = (104 \div 13) = 8$ (c)  $\frac{96}{12} = (96 \div 12) = 8$  (d)  $\frac{81}{9} = (81 \div 9) = 9$
- 4. Change the following improper fractions into mixed fractions:

a) 
$$\frac{17}{3}$$
: We divide the numerator 17 by denominator 3.

$$\begin{array}{c} 5 \\ 3 \hline 17 \\ -15 \\ 2 \end{array}$$
 In the c  
number, 1  
denomination

division, quotient 5 is whole remainder 2 is numerator and the ator remains the same, 3.

Thus, the mixed fraction is  $5\frac{2}{3}$ .

$$\frac{23}{5}$$

(

(b)

We divide the numerator 23 by denominator 5.

$$5) 23$$

$$-20$$

$$3$$

In the division, quotient 4 is whole number, remainder 3 is numerator and the

denominator remains the same, 5.

Thus, the mixed fractions is  $4\frac{3}{5}$ .

 $\frac{33}{10}$ : We divide the numerator 33 by (c) denominator 10.  $10\overline{\smash{\big)}\ 33}$  -30  $\overline{3}$ In the division, quotient 3 is whole number, remainder 3 is numerator and the denominator remains the same, 10.

Thus, the mixed fraction is  $3\frac{3}{10}$ 

- We divide the numerator 41 by 4 denominator 9. 9) 41
  - In the division, quotient 4 is whole 36 number, remainder 5 is numerator and the denominator remains the same, 9.

Thus, the mixed number is  $4\frac{5}{9}$ 

- Change the following mixed fractions into improper 5. fractions:
  - (a)  $2\frac{3}{5}$ : First, we multiply the whole number 2 with the denominator.  $2 \times 5 = 10$ Then, we add numerator 3 to the above product. 10 + 3 = 13The above sum 13 is numerator and denominator remains the same, 5.

Thus, the improper fraction is  $\frac{13}{5}$ 

(b)  $4\frac{5}{6}$ : First, we multiply the whole number 4 with the denominator 6.  $4 \times 6 = 24$ Then, we add numerator 5 to the above product. 24 + 5 = 29

> The above sum 29 is numerator and denominator remains the same, 6.

Thus, the fraction is  $\frac{29}{6}$ (c)  $5\frac{2}{7}$ : First, we multiply the whole number 5 with the denominator 7.  $5 \times 7 = 35$ Then, we add numerator 2 to the above product.

35 + 2 = 37

The above sum 37 is numerator and denominator remains the same. 7.

Thus, the improper fraction is  $\frac{37}{7}$ 

(d)  $7\frac{4}{9}$ : First we multiply the whole number 7 with the denominator 9.  $7 \times 9 = 63$ Then, we add numerator to the above product. 63 + 4 = 67The above sum 67 is numerator and denominator remains the same, 9.

Thus, the improper fraction is  $\frac{67}{9}$ 

6. Compare the following pairs of fractions and put a sign of >, < or =:

[Hint : If the denominator are same and numerator differ from each other, then the fractions with greater numerator will be greater.]

(a) 
$$\frac{6}{7} \ge \frac{5}{7}$$
 (b)  $\frac{3}{5} \le \frac{4}{5}$ 

(c) 
$$\frac{3}{7} \le \frac{4}{7}$$
 (d)  $\frac{5}{9} \equiv \frac{5}{9}$   
Reduce each of the following fractions to lowest terms :  
(a)  $\frac{35}{9} = \frac{35 \div 5}{9} = \frac{7}{7}$  (b)  $\frac{12}{12} = \frac{12 \div 12}{12} = \frac{1}{12}$ 

60 60 ÷ 5 12 72 72 ÷ 12 6  
(c) 
$$\frac{15}{39} = \frac{15 \div 3}{39 \div 3} = \frac{5}{13}$$
 (d)  $\frac{24}{54} = \frac{24 \div 6}{54 \div 6} = \frac{4}{9}$ 

## 8. Add or subtract and reduce to the lowest terms :

# (a) $\frac{6}{7} + \frac{5}{7} = \frac{6+5}{7} = \frac{11}{7}$

7.

(b) 
$$\frac{9}{10} - \frac{3}{10} = \frac{9-3}{10} = \frac{6}{10} = \frac{6 \div 2}{10 \div 2} = \frac{3}{5}$$

(c) 
$$\frac{11}{15} + \frac{4}{15} = \frac{11-4}{15} = \frac{15}{15} = \frac{15 \div 15}{15 \div 15} = \frac{1}{1} = 1$$

(d) 
$$\frac{8}{9} - \frac{5}{9} = \frac{8-5}{9} = \frac{3}{9} = \frac{3 \div 3}{9 \div 3} = \frac{1}{3}$$

(e) 
$$\frac{1}{3} + 1\frac{1}{3} = \frac{1}{3} + \frac{4}{3} = \frac{7}{3}$$

(f) 
$$1\frac{1}{4} + 2\frac{3}{4} = \frac{5}{4} + \frac{11}{4} = \frac{5+11}{4} = \frac{16}{4} = \frac{16 \div 4}{16 \div 4} = \frac{4}{1} = 4$$

(g) 
$$\frac{2}{6} + \frac{5}{6} = \frac{2+5}{6} = \frac{7}{6} = 1\frac{1}{6}$$

(h) 
$$\frac{5}{8} - \frac{1}{8} = \frac{5-1}{8} = \frac{4}{8} = \frac{4 \div 4}{8 \div 4} = \frac{1}{2}$$

(i) 
$$1\frac{1}{10} + \frac{7}{10} = \frac{11}{10} + \frac{7}{10} = \frac{11+7}{10} = \frac{18}{10} = \frac{18 \div 2}{10 \div 2} = \frac{9}{5} = 1\frac{4}{5}$$

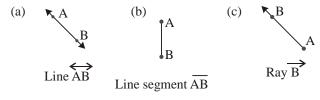
(j) 
$$\frac{11}{12} - \frac{3}{12} = \frac{11 - 3}{12} = \frac{8}{12} = \frac{8 \div 4}{12 \div 4} = \frac{2}{3}$$

(k) 
$$\frac{2}{7} + \frac{4}{7} = \frac{2+4}{7} = \frac{6}{7}$$

(1) 
$$2\frac{1}{4} - 1\frac{2}{4} = \frac{9}{4} - \frac{6}{4} = \frac{9-6}{4} = \frac{3}{4}$$



1. Mark points and name these figures :



2. Write the difference between the following :(a) Difference between a line and a line segment :

A collection of points along a straight path that can be extended to any length on both sides is called a line. A line cannot be measured.

Whereas, a portion of a line is called a line segment that has two end points and it can be measured.

## (b) Difference between a line and a ray :

A line has no end points and it can be extended to any length on both sides. Whereas, a ray is a part of a line that has only one end point and it can be extended indefinitely only in one direction.

## (c) Difference between a ray and a line segment :

A ray is a part of a line that has only one end point and it can be extended indefinitely in one direction. Where as, a line segment is a portion of a line that has two end points and it cannot be extended in any direction.

## 3. Fill in the blanks :

	(a) line	(b) two	(c) ray
4.	(a) $AB = 3 cm$	PQ = 5 cm	AB < PQ
	(b) $RS = 5 cm$	XY = 4 cm	RS>XY

- 5. Do yourself.
- **6.** 12
- 7. Do yourself.

## 1. In the given figures :

- (a) EDF (b) Arms DE and DF (c) D
- 2. Figure (b) represents an angle.
- 3. Do yourself.
- 4. In the given figure :(a) A, B(b) X, Y

Exercise 9.3

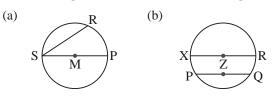
Tick (✓) the open and cross (X) the closed shapes in the figures :

(a) X (b) X (c)  $\checkmark$  (d) X (e)  $\checkmark$ 

- 2. Colour the polygons blue : Colour (d) and (e) blue.
- **3.** Say whether true (T) or false (F): (a) T (b) F (c) T
- 4. Do yourself.

Exercise 9.4

- 1. Name the parts of the circle shown on the right : Fill in the blanks :
- (a) O (b) OR (c) diameter (d) chord2. In the circle given below, draw the following :



- 5. Draw the mirror image of each of the following :
- 3. Find the radius of the circles having the diameters given below:
  - [Hint: Radius =  $\frac{1}{2}$  Diameter] (a) Radius  $\left(\frac{1}{2} \times 10\right)$  cm = 5 cm (b) Radius  $\left(\frac{1}{2} \times 6\right) m = 3 m$ (c) Radius  $\left(\frac{1}{2} \times 50\right)$  cm = 25 cm (d) Radius  $\left(\frac{1}{2} \times 18\right)$  m = 9 cm
  - (e) Radius  $\left(\frac{1}{2} \times 42\right)$  cm = 21 cm
- Find the diameters of the circles having the following 4. radius:

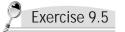
[Hint: Diameter =  $2 \times \text{Radius}$ ]

- (a) Diameter =  $(2 \times 18)$  cm = 36 cm (b) Diameter =  $(2 \times 12)$  cm = 24 cm (c) Diameter =  $(2 \times 5)$  m = 10 m (d) Diameter =  $(2 \times 22)$  m = 44 m (e) Diameter =  $(2 \times 15)$  cm = 30 cm
- 5. Use a ruler and measure the radius of the following circles:

OM = 1.2 cmON = 1.5 cm(a) OA = 1 cmDiameter =  $(2 \times 1)$  cm, Diameter =  $(2 \times 1.2)$  cm,  $Diameter = (2 \times 1.5) cm$  $= 2 \,\mathrm{cm}$  $= 2.4 \, \text{cm}$  $=3 \,\mathrm{cm}$ 

- 6. Do yourself.
- 7. Write 'T' for true or 'F' for false statements :
- (a) F (b) T (c) F (d) T
- (a) Diameter of the bangle =  $2 \times radius = (2 \times 3) cm$ 8.  $=6 \,\mathrm{cm}$ 
  - (b) Diameter of the swimming pool = 24 m

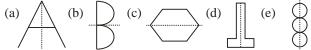
Radius of the swimming pool  $=\frac{1}{2}$  Diameter  $=\left(\frac{1}{2}\times24\right)m$  $= 12 \,\mathrm{m}$ 



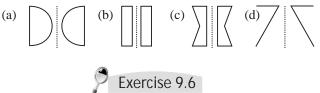
- 1. Put a tick  $(\checkmark)$  on the figures which are symmetrical : (b) (a) (e)
- Is the dotted line the line of symmetry ? Write 'Y' if yes 2. and 'N' if no :



3. Draw the line of symmetry for each of the following :



Are the figures given below examples of reflection : 4. (a) Yes (b) Yes (c) No (d) Yes



- A. Put a tick () under the top view of the object given on the left :
  - **2.** (b) **3.** (b) **4.** (c) **1.** (c)
- B. Put a tick under the side view of the object given on the left: (h) 🖌 **1.** (c

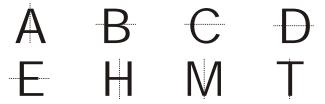
1. Find the diameters of the circles whose radius are :

[Hint: Diameter =  $2 \times \text{Radius}$ 

- (a) Diameter  $(2 \times 16) \, \text{cm} =$ 32 cm =
- (b) Diameter =  $(2 \times 25)$  cm = 50 cm
- $(2 \times 30) \, \text{cm} =$ 60 cm (c) Diameter =
- (d) Diameter =  $(2 \times 50) \, \text{cm} =$ 100 cm
- (e) Diameter =  $(2 \times 70) \, \text{cm} =$ 140 cm Find the radius of the circles whose diameters are : 2.

[Hint: Radius = 
$$\frac{1}{2} \times \text{Diameter}$$
]

- (a) Radius  $\left(\frac{1}{2} \times 10\right)$  cm = 5 cm
- (b) Radius  $\left(\frac{1}{2} \times 14\right)$  cm = 7 cm
- (c) Radius  $\left(\frac{1}{2} \times 18\right)$  cm = 9cm
- (d) Radius  $\left(\frac{1}{2} \times 20\right)$  m = 10 cm
- (e) Radius  $\left(\frac{1}{2} \times 100\right)$  cm = 50 cm
- 3. Draw the line of symmetry in each of the following letters:



Draw the other half of the following figures so that they 4. are symmetrical and colour the shapes also:





- Put a tick (✓) under the side view for the figures given on 6. the left :
  - (a) (iii) ✓ (b) (ii) 🗸



## Perimeter and Area

Exercise 10.1

- 1. Find the perimeter of the figures in the grid. Suppose, each side of a square is 1 cm :
  - (a) Perimeter = (4+1+4+1) cm = 10 cm
  - (b) Perimeter = (2+5+5+4+3+1) cm = 20 cm
  - (c) Perimeter = (4+1+3+2+3+1+4+4) cm = 22 cm
  - (d) Perimeter = (1+1+3+2+6+1+1+1+1+1)cm=18cm
  - (e) Perimeter = (3+1+2+1+2+1+1+1) cm = 12 cm
  - (f) Perimeter = (3+4+3+4) cm = 14 cm
  - (g) Perimeter = (2+3+2+2+2+4+2+1) cm = 18 cm
- 2. Find the perimeter of the following figures :
  - (a) Perimeter = (19+11+11+19+16) m = 76 m
  - (b) Perimeter = (10+10+12+10+12) m = 64 m
  - (c) Perimeter = (5+5+5+3+4) m = 22 m
  - (d) Perimeter = (6+4+7+8+2+3) m = 30 m
- 3. Find the perimeter :

(10)

- (a) Perimeter = (300 + 300 + 800 + 300 + 300 + 300 + 800 + 300) m
  - $= 3400 \,\mathrm{m}$
  - Perimeter = 3 km 400 m
- (b) Perimeter = (30+35+10+15+10+15+10+35) cm = 160 cm
  - Perimeter = 1 m 60 cm

## 4. Find the perimeter :

- (a) Length of rectangle = 200 m, Breadth of rectangle = 150 mSo, perimeter of rectangle = (200 + 150 + 200 + 150) m= 700 m
- (b) Sides of the triangle are 256 cm, 300 cm and 435 cm. So, perimeter of triangle = (256+300+435) cm = 991 cm
- (c) Sides of the square are 30 m each. So, perimeter of square = (30 + 30 + 30 + 30) m = 120 m

5. The side of the square field = 24 mSo, perimeter of the square field = (24+24+24+24) m = 96 mWire needed to fence the square field = Perimeter of the square field = 96 mTherefore, 96 m wire will be needed to fence the square

field. 6. Length of rectangular park = 86 m Breadth of rectangular park = 64 m So, perimeter of the park = (86 + 64 + 86 + 64) m = 300 m The boy runs 2 times around the park =  $2 \times$  perimeter of the park =  $(2 \times 300)$  m = 600 m

Therefore, the distance covered by the boy is 600 m.

7. Rahul bought a card of 6 cm by 3 cm. Rohit bought a card of 8 cm by 2 cm.

[Hint : The shape of cards are rectangular.] Perimeter of Rahul's card = (6+3+6+3) cm = 18 cm Perimeter of Rohit's card = (8+2+8+2) cm = 20 cm Comparing the perimeters of the two card

- (a) 20 cm > 18 cm
  - Therefore, Rohit's card has a bigger perimeter.
- (b) The difference in the perimeters of the two cards = 20 cm 18 cm = 2 cm
- 8. Neha wants to lace around a bed sheet of the given size. She bought a 20 m roll of lace. Find :

Perimeter of the bed sheet

m	cm	= 2 m 50 cm + 3 m 50 cm + 2 m
2	5 0	$= 50 \mathrm{cm} + 3 \mathrm{m}  50 \mathrm{cm}$
3	5 0	$= 12 \mathrm{m}$
+ 2	5 0	
3	5 0	
12	0 0	

- (a) Lace used for one bed sheet = Perimeter of bed sheet Therefore, 12 m lace is used for one bed sheet.
- (b) The lace left in the roll = Lace in the roll Lace used = 20 m - 12 m

$$=8 \mathrm{m}$$

Therefore, 8 m lace will be left in the roll.

9. Length of the playground = 100 m

Breadth of the playground = 50 m

So, perimeter of the playground = (100 + 50 + 100 + 50) m = 300 m

Wire needed to fence the playground =  $(3 \times 300)$  m

$$=900 \,\mathrm{m}$$

Length of wire the school authorities have = 800 m

So, more wire needed to fence the playground 3 times

$$=(900-800) \,\mathrm{m}$$
  
= 100 m

Therefore, 100 m more wire is needed to fence the playground 3 times.

- 1. Do yourself.
- 2. Find the area of the following figures if each side of a small square measures 1 cm :

(a) Area of one small square = 
$$(1 \times 1)$$
 sq cm

=1 sq cm

There are 20 small squares in the figure.

Therefore, the area of the figure  $= (20 \times 1)$  sq cm

$$=20$$
 sq cm

(b) Area of one small square =  $(1 \times 1)$  sq cm

There are 25 small squares in the figure.

Therefore, the area of the figure =  $(25 \times 1) = 25$  sq cm.

**3.** Do yourself.

(	11)	Me	asurement	4.		<b>nvert the</b> have, 1 n		-
	$\bigvee$					$70\mathrm{mm}$		
					(b)	76 mm		
		Exercise 11.1					= (70	
	~						= 7 c	
1.		owing into metres :			(c)	85 mm		
	We have, $1 \text{ km} = 1$						= (80	
	(a) $7 \text{ km} = 7 \times 10$						= 8 c	
	(b) $6 \text{ km} 225 \text{ m}$	$= 6 \times 1000 \mathrm{m} + 225 \mathrm{m}$			(d)	62 mm		
		$= 6000 \mathrm{m} + 225 \mathrm{m}$					= (60	
	(a) 01 at 105 at	$= 6225 \mathrm{m}$				100	= 60	
	(c) $8 \text{ km} 105 \text{ m}$	$= 8 \times 1000 \mathrm{m} + 105 \mathrm{m}$				100 mm		
		= 8000  m + 105  m = 8105 m			(1)	126 mm		
	(d) $0 \text{ km } 205 \text{ m}$	= 8105  m = 9 × 1000 m + 205 m					= (12)	
	(u) 9 kiii 203 iii	$= 9 \times 1000 \text{ m} + 203 \text{ m}$ = 9000 m + 205 m		_	C		= 12	
		= 9000  m + 203  m = 9205 m		5.		nvert the		0
	(e) 2 km 95 m	= 9205  m = 2 × 1000 m + 95 m				have, 1 ci		
	$(C) 2 \operatorname{KIII} 93 \operatorname{III}$	$= 2 \times 1000 \text{ m} + 95 \text{ m}$ = 2000 m + 95 m				600 cm		
		= 2000  m + 93  m = 2095 m			(b)	726 cm		
	(f) 10 km 50 m	= 2000  m = $10 \times 1000 \text{ m} + 50 \text{ m}$					= (70)	
	(1) 10 km 50 m	$= 10 \times 1000 \text{ m} + 50 \text{ m}$ = 10000 m + 50 m			(a)	682 cm	= 7 n	
		$= 10050 \mathrm{m} + 50 \mathrm{m}$			(C)	082 CIII	= 60	
2.	Convert the foll	owing into centimetres :					= (00) = 6 n	
<i>.</i>	We have, $1 \text{ m} = 10$				(d)	1000 cm		
	(a) $6m = 6 \times 100$					1265 cm		
	(b) $7 \text{ m} 25 \text{ cm}$	$= 7 \times 100 \mathrm{cm} + 25 \mathrm{cm}$			(0)	1205 01	= 120 = (12	
	(0) / 11/25 011	$= 700 \mathrm{cm} + 25 \mathrm{cm}$					= (12) = 12	
		$= 725 \mathrm{cm}$			(f)	1503 cm		
	(c) 8 m 12 cm	$= 8 \times 100 \mathrm{cm} + 12 \mathrm{cm}$			(1)	1505 01	= 130 = (15	
	(1) 011111	$= 800 \mathrm{cm} + 12 \mathrm{cm}$					= 15	
		$= 812 \mathrm{cm}$		6.	Co	nvert the		
	(d) 10 m 56 cm	$= 10 \times 100 \mathrm{cm} + 56 \mathrm{cm}$		0.		have, 1 n		-
		$= 1000 \mathrm{cm} + 56 \mathrm{cm}$				8000 m		
		$= 1056 \mathrm{cm}$				7095 m		
	(e) 21 m 8 cm	$= 21 \times 100 \mathrm{cm} + 8 \mathrm{cm}$			(0)	7075 III	= (70	
		$= 2100 \mathrm{cm} + 8 \mathrm{cm}$					$= 7 \mathrm{k}$	
		$= 2108  \mathrm{cm}$			(c)	6845 m		
	(f) 15 m 6 cm	$= 15 \times 100 \mathrm{cm} + 6 \mathrm{cm}$					= (60	
		$= 1500 \mathrm{cm} + 6 \mathrm{cm}$					= 6 k	
		$= 1506 \mathrm{cm}$			(d)	8790 m		
3.	Convert the follo	owing into millimetres :					= (80	
	We have, $1 \text{ cm} = 1$						= 8 k	
	(a) $8 \mathrm{cm} = 8 \times 10^{-10}$				(e)	15785 r	n = 150	000 n
	. ,	$= 83 \times 10 \mathrm{mm} + 2 \mathrm{mm}$					= (15	5000-
	(0) 00 000 0000	$= 830 \mathrm{mm} + 2 \mathrm{mm}$					= 15	km+
		$= 832 \mathrm{mm}$			(f)	20495 r	n = 200	+000 +
	(a) $12 \text{ am} 4 \text{ mm}$	$= 12 \times 10 \mathrm{mm} + 4 \mathrm{mm}$					= (20	0000
	(c) 12 cm 4 mm						= 20	km+
		$= 120 \mathrm{mm} + 4 \mathrm{mm}$					6	
		= 124 mm					2	Ex
	(d) 15 cm	$= 15 \times 10 \mathrm{mm} = 150 \mathrm{mm}$		1	A 7	а.		
	(e) $10 \text{ cm} 5 \text{ mm}$	$= 10 \times 10  mm + 5  mm$		1.	Ad		_	_
		$= 100 \mathrm{mm} + 5 \mathrm{mm}$			(a)	km	m	cm
		= 105  mm					275	92
	(f) 20 cm 6 mm	$= 20 \times 10mm + 6mm$					809	65
		= 200mm + 6mm					$\frac{078}{162}$	09
		$= 206 \mathrm{mm}$	60			136	163	66
			00					

vert the following into centimetres and millimetres :

ave, 1 mm = 1/10 cm, so  $70 \,\mathrm{mm} = (70 \div 10) \,\mathrm{cm} = 7 \,\mathrm{cm}$  $76 \,\mathrm{mm} = 70 \,\mathrm{mm} + 6 \,\mathrm{mm}$  $= (70 \div 10) \,\mathrm{cm} + 6 \,\mathrm{mm}$  $= 7 \mathrm{cm} + 6 \mathrm{mm} = 7 \mathrm{cm} 6 \mathrm{mm}$  $85 \,\mathrm{mm} = 80 \,\mathrm{mm} + 5 \,\mathrm{mm}$  $= (80 \div 10) \text{ cm} + 5 \text{ mm}$  $= 8 \,\mathrm{cm} + 5 \,\mathrm{mm} = 8 \,\mathrm{cm} \,5 \,\mathrm{mm}$  $62 \,\mathrm{mm} = 60 \,\mathrm{mm} + 2 \,\mathrm{mm}$  $= (60 \div 10) \,\mathrm{cm} + 2 \,\mathrm{mm}$  $= 6 \operatorname{cm} + 2 \operatorname{mm} = 6 \operatorname{cm} 2 \operatorname{mm}$  $00 \,\mathrm{mm} = (100 \div 10) \,\mathrm{cm} = 10 \,\mathrm{cm}$  $26 \,\mathrm{mm} = 120 \,\mathrm{mm} + 6 \,\mathrm{mm}$  $= (120 \div 10) \,\mathrm{cm} + 6 \,\mathrm{mm}$ = 12 cm + 6 mm = 12 cm 6 mmvert the following into metres and centimetres : ave, 1 cm = 1/100 m, so  $600 \,\mathrm{cm} = (600 \div 100) \,\mathrm{m} = 6 \,\mathrm{m}$  $726 \,\mathrm{cm} = 700 \,\mathrm{cm} + 26 \,\mathrm{cm}$  $= (700 \div 100) \,\mathrm{m} + 26 \,\mathrm{cm}$ = 7 m + 26 cm = 7 m 26 cm $682 \,\mathrm{cm} = 600 \,\mathrm{cm} + 82 \,\mathrm{cm}$  $= (600 \div 100) \text{ m} + 82 \text{ cm}$ = 6 m + 82 cm = 6 m 82 cm $000 \,\mathrm{cm} = (1000 \div 100) \,\mathrm{m} = 10 \,\mathrm{m}$ 265 cm = 1200 cm + 65 cm $= (1200 \div 100) \text{ m} + 65 \text{ cm}$ = 12 m + 65 cm = 12 m 65 cm $503 \,\mathrm{cm} = 1500 \,\mathrm{cm} + 3 \,\mathrm{cm}$  $= (1500 \div 100) \,\mathrm{m} + 3 \,\mathrm{cm}$ = 15 m + 3 cm = 15 m 3 cmvert the following into kilometres and metres : ave, 1 m = 1/1000 km, so  $8000 \,\mathrm{m} = (8000 \div 1000) \,\mathrm{km} = 8 \,\mathrm{km}$  $7095 \,\mathrm{m} = 7000 \,\mathrm{m} + 95 \,\mathrm{m}$  $= (7000 \div 1000) \, \text{km} + 95 \, \text{m}$ = 7 km + 95 m = 7 km 95 m $6845 \,\mathrm{m} = 6000 \,\mathrm{m} + 845 \,\mathrm{m}$  $= (6000 \div 1000) \, \text{km} + 845 \, \text{m}$ = 6 km + 845 m = 6 km 845 m $8790 \,\mathrm{m} = 8000 \,\mathrm{m} + 790 \,\mathrm{m}$  $= (8000 \div 1000) \, \text{km} + 790 \, \text{m}$ = 8 km + 790 m = 8 km 790 m5785 m = 15000 m + 785 m $= (15000 \div 1000) \text{ km} + 785 \text{ m}$  $= 15 \, km + 785 \, m = 15 \, km \, 785 \, m$  $20495 \,\mathrm{m} = 20000 + 495 \,\mathrm{m}$  $= (20000 \div 1000) \text{ km} + 495 \text{ m}$  $= 20\,km + 495\,m = 20\,km\,495\,m$ Exercise 11.2 (b) <u>km</u> km m cm cm mm 275 54 92 105 72 9 76 809 65 264 38 7

+ 68

438

54

66

4

0

2.	Write in vertical form and find the sum of the following :
	(a) <b>km m</b> (b) <b>km m</b> 725 620 375 105
	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
	(c) $\mathbf{km}$ $\mathbf{m}$ $\mathbf{cm}$ (d) $\mathbf{km}$ $\mathbf{m}$ $45 \ 282 \ 25$ $525 \ 25$ $+ \frac{38}{3993} \frac{710}{20} \frac{95}{20}$ $+ \frac{162}{963} \frac{76}{96}$
	(e) $\mathbf{km}$ $\mathbf{m}$ 308 $09254$ $62+ \frac{72}{635} \frac{85}{56} (f) \mathbf{m} \mathbf{cm} \mathbf{mm}180$ $25$ $9305$ $78$ $6+ \frac{486}{04} \frac{04}{5}$
3.	Find the difference :
	(a) $\mathbf{km}$ $\mathbf{m}$ (b) $\mathbf{km}$ $\mathbf{m}$ (c) $\mathbf{km}$ $\mathbf{m}$ $\mathbf{m}$ 2 1 8 2 1 5 102 0 4 5 12 5 0 8 6 -109786 $-78056$ $-96798108429$ 23989 28 28 8
4.	Subtract by writing in vertical form :
	(a) $\mathbf{km}$ $\mathbf{m}$ (b) $\mathbf{km}$ $\mathbf{m}$ 48 321 -35 289 13 032 (b) $\mathbf{km}$ $\mathbf{m}$ 100 000 -85 785 14 215
	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
5.	The length of electric wire = $m m$ The length of its piece = $1 30 00$ The length of wire left = $-18 75$ The length of wire left in the roll is $111 m 25 cm$ . $111 25$
6.	kmmTraveling on the first day= $56$ $525$ Traveling on the second day= $45$ $265$ Traveling on the third day= $+38$ $285$ Total distance covered= $140$ $075$ The total distance covered by Mr Vema and his family was $140 \text{ km 75 m.}$
7.	The distance from Delhi to Chandigarh = $250  000$ Mrs Pinto has covered the distance = $-178  575$ More distance he need to travel = $71  425$ Mr. Pinto needs to travel 71 km 425 m.

Mr. Pinto needs to travel 71 km 425 m.

			km	m	cm	
8.	Anil ran	=	1	250	35	
	Anju ran	=	2	325	65	
	Amar ran	=	+ 3	175	22	
	Total distance they covered	=	6	751	22	

The total distance they covered altogether was 6 km 751 m 22 cm.

## Exercise 11.3

## 1.

Convert into lower units :				
We have, $1 \text{ kg} = 1000 \text{ g}$ , so				
(a) $12 \text{ kg} = (12 \times 1000) \text{ g} = 12000 \text{ g}$				
(b) $15 \text{ kg} = (15 \times 1000) \text{ g} = 15000 \text{ g}$				
(c) $25 \text{ kg} 450 \text{ g} = (25 \times 1000) \text{ g} + 450 \text{ g}$				
$= 25000 \mathrm{g} + 450 \mathrm{g} = 25450 \mathrm{g}$				
(d) $20 \text{ kg} 275 \text{ g} = (20 \times 1000) \text{ g} + 275 \text{ g}$				
= 20000 g + 275 g = 20275 g				
(e) $65 \text{ kg } 145 \text{ g} = (65 \times 1000) \text{ g} + 145 \text{ g}$				
= 65000  g + 145  g = 65145  g				
(f) $30 \text{ kg} 110 \text{ g} = (30 \times 1000) \text{ g} + 110 \text{ g}$				
= 30000  g + 110  g = 30110  g				
(g) $19 \text{ kg} 54 \text{ g} = (19 \times 1000) \text{ g} + 54 \text{ g}$				
= 19000  g + 54  g = 19054  g				
(h) $20 \text{ kg} 50 \text{ g} = (20 \times 1000) \text{ g} + 50 \text{ g}$				
= 20000  g + 50  g = 20050  g				
Convert into higher units :				
We have, $1 g = 1/1000 \text{ kg}$ , so				
(a) $7000 \text{ g} = (7000 \div 1000) \text{ kg} = 7 \text{ kg}$				

- (b)  $6298 g = (6298 \div 1000) kg = 6 kg 298 g$
- (c)  $13275 \text{ g} = (13275 \div 1000) \text{ kg} = 13 \text{ kg} 275 \text{ g}$
- (d)  $25064 g = (25064 \div 1000) kg = 25 kg 64 g$ (e)  $54197 g = (54197 \div 1000) kg = 54 kg 197 g$
- (f)  $18079 g = (18079 \div 1000) kg = 18 kg 79 g$
- (g)  $62870 g = (62870 \div 1000) kg = 62 kg 870 g$
- (h)  $30075 \text{ g} = (30075 \div 1000) \text{ kg} = 30 \text{ kg} 75 \text{ g}$

Exercise 11.4

## 1. Find the sum :

2.

(a)	kg	g	(b) kg	g	(c) kg	g
	610	156	45	$\overline{0} \ 3 \overline{50}$	205	610
	285	487	12	5 487	517	085
+	185	511	+ 26	7 518	+ 368	218
1	081	154	84	3 3 5 5	1090	913

2. Write in vertical form and find the sum of the following :

(a)	kg	g	(b) <b>kg</b>	g
	32	195	145	528
	248	687	56	075
	+ 358	275	+ 3 1 0	480
	639	157	512	083



(c)	<b>kg</b> 7 0 8	<b>g</b> 0 5 8	(d) kg 925	<b>g</b> 6 2 5
	217	120	218	385
	+ 85	085	+ 87	095
	1010	263	1231	105

## 3. Find the difference :

(a)	kg	g	(b) <b>kg</b>	g	(c) kg g
	250	725	375	$2\overline{50}$	500 000
	-187	486	-189	469	-275 585
	63	239	185	781	224 415

4. Write in vertical form and subtract :

(a) $kg 7 8 0 - \frac{625}{154}$	g 1 2 5 2 8 0 8 4 5	(b) $\frac{\text{kg}}{400} - \frac{385}{15}$	g 105 000 105
(c) $kg 200 - 195 5$	<b>g</b> 800 725 075		g 000 090 910

			kg	g
5.	Sweets sold on Monday	=	20	250
	Sweets sold on Tuesday	=	35	625
	Sweets sold on Wednesday	=	+50	000
			105	875

The total amount of sweets sold on all three days is 105 kg 875 g.

kg g 6. The weight of sack of potatoes 000 56 The weight of potatoes taken out of it = -28750 The balance the weight of potatoes in the = 27 250 sack

The weight of potatoes in the sack now is 27 kg 250 g.

- kg g 7. Avni's weight 21 325 = -17 687 Her sister's weight =3 638 Difference in their weights = Avni's weight is more and by 3 kg 638 g.
- kg g Varun's weight now 215 8. 58 = 2 775 He gained to get it = So, his earlier weight was = 55 440 Varun's earlier weight was 55 kg 440 g.

Exercise 11.5

## 1. Convert into lower units :

- We have,  $11 = 1000 \, ml$ , so
- (a)  $6l = (6 \times 1000) ml = 6000 ml$
- (b) 7*l*250*ml*  $= (7 \times 1000) ml + 250 ml$ 
  - $= 7000 \,\mathrm{ml} + 250 \,\mathrm{ml}$

 $= 7250 \, ml$ 

- (c)  $12 l = (12 \times 1000) ml = 12000 ml$
- (d)  $15 l \, 105 \, ml = (15 \times 1000) \, ml + 105 \, ml$ 105 ml

$$= 15000 \, ml + 1$$

- $= 15105 \, ml$ (e)  $10l450ml = (10 \times 1000)ml + 450ml$ 
  - $= 10000 \, ml + 450 \, ml$ 
    - $= 10450 \, ml$
- (f)  $20 l = (20 \times 1000) \text{ ml} = 20000 \text{ ml}$

(g) 
$$19l725 ml = (19 \times 1000) ml + 725 ml$$
  
=  $19000 ml + 725 ml$ 

- $= 19725 \, ml$
- (h) 15*l*25*ml*  $= (15 \times 1000) ml + 25 ml$  $= 15000 \, ml + 25 \, ml$ 
  - $= 15025 \, ml$

#### 2. Convert into higher units :

We have, 1 ml	= 1	$\frac{1}{100}$ <i>l</i> , so	
(a) 3000 ml	=	$(3000 \div 1000) l =$	31
(b) 8000 <i>ml</i>	=	$(8000 \div 1000) l =$	8 <i>l</i>
(c) 2875 ml	=	$(2875 \div 1000) l =$	2 l 875 ml
(d) 3805 ml	=	$(3805 \div 1000) l =$	3 l 805 ml
(e) 16240 <i>ml</i>	=	$(16240 \div 1000) l =$	16 <i>l</i> 240 ml
(g) 7000 <i>ml</i>	=	$(7000 \div 1000) l =$	7 l
(g) 35065 <i>ml</i>	=	$(35065 \div 1000) l =$	35 l 65 ml
(h) 82458 <i>ml</i>	=	$(82458 \div 1000)l=$	82l458ml

Exercise 11.6

## 1. Find the sum :

(a) <i>l</i>	ml	(b)	l	ml	(c)	l	ml
25	375	1	25	205		318	450
+18	487	2	76	389		75	025
43	862	+	85	075		+ 62	361
		4	86	669		455	836

## 2. Write in vertical form and find the sum :

(a)	l	ml	(b)	l	ml
	27	315		152	408
	+16	450		78	365
	43	765		+ 39	270
				270	043
(c)	l	ml	(	(d) l	ml

1	- L	mu	(u) 1	1111
	248	105	562	000
	362	087	256	105
	+119	025	+118	287
	729	217	936	392

## 3. Write in vertical from and subtract :

(a) $\frac{1}{20}$ -19	<i>ml</i> 300 256	(b)	<i>l</i> 45 -42	<i>ml</i> 0 0 0 6 2 8
1	044		2	372
(c) <i>l</i>	ml	(d)	l	ml
500	925		700	000
- 325	785		689	208
175	140		10	792

62

## 4. Find the difference :

(a)	l	ml	(b)	l	ml	(c)	l	ml
	25	325		1 2 5	724		300	000
	-16	414	-	- 1 0 8	085	-	-189	745
	8	911		17	639		110	255
						-		

5. Consumption of water by Mr. Sharma's family = l ml275 500 Consumption of water by their neighbour = +385175Total consumption 660 675

Difference in consumption

	l	ml
=	385	175
= -	275	500
=	109	675

The total consumption of the two families per day is 660 l675 ml. Mr Sharma's neighbor consumes more water and by 109*l* 675 ml. l ml

1

6.	Milk needed for the wedding	=	1000	000
	The milk supply that came	=	- 289	250
	The milk needed more	=	710	750
	7101750 ml more milk is needed.			

7.	The diesel bought by Sohan	=	90	500
	The diesel that was used	=	- 6 8	825
	The diesel left in the bus	=	21	675
	211675 ml diesel is still left in th	ne bus.		

## Revision

### 1. Fill in the blanks :

(a)	7 km 350 m	$= (7 \times 1000) \mathrm{m} + 350 \mathrm{m}$
		$= 7000 \mathrm{m} + 350 \mathrm{m}$
		$= 7350 \mathrm{m}$
(b)	8 km =	$= (8 \times 1000) \mathrm{m} = 8000 \mathrm{m}$
(c)	725 cm =	$= (725 \div 100) \mathrm{m} = 7 \mathrm{m}  25 \mathrm{cm}$

- (d) 6345 m  $= (6345 \div 1000) \,\mathrm{km} = 6 \,\mathrm{km}\,345 \,\mathrm{m}$
- (e) 56 mm  $= (56 \div 10) \text{ cm} = 5 \text{ cm} 6 \text{ mm}$
- $= (82 \div 10) \text{ cm} = 8 \text{ cm} 2 \text{ mm}$ (f) 82 mm
- (g) 12 kg  $= (12 \times 1000) g = 12000 g$
- (h)  $9 \text{ kg} 175 \text{ g} = (9 \times 1000) \text{ g} + 175 \text{ g}$

$$= 9000 \text{ g} + 175 \text{ g} = 9175 \text{ g}$$

$$= (2875 \pm 1000) \text{ kg} - 2 \text{ kg} 875 \text{ g}$$

(i) 
$$28/5 \text{ g} = (28/5 \div 1000) \text{ kg} = 2 \text{ kg} 8/5 \text{ g}$$
  
(j)  $9075 \text{ g} = (9075 \div 1000) \text{ kg} = 9 \text{ kg} 75 \text{ g}$ 

(i) 
$$9075g = (9075 \div 1000) \text{ kg} = 3$$
  
(k)  $8I = (8 \times 1000) \text{ ml} = 8000 \text{ ml}$ 

(i) 
$$7 l625 \text{ ml} = (7 \times 1000) \text{ ml} + 625 \text{ ml}$$

$$= 7000 \text{ ml} + 625 \text{ ml} = 7625 \text{ ml}$$

- (m)  $2075 \text{ ml} = (2075 \div 1000) 1 = 2175 \text{ ml}$
- (n)  $12625 \text{ ml} = (12625 \div 1000) \text{l} = 12 l 625 \text{ ml}$
- (o)  $1l750 \,\mathrm{ml} = (1 \times 1000) \,\mathrm{ml} + 750 \,\mathrm{ml}$  $1000 \text{ ml} \pm 750 \text{ ml} = 1750 \text{ ml}$

$$= 1000 \,\mathrm{ml} + 750 \,\mathrm{ml} = 1750 \,\mathrm{ml}$$

(p) 
$$1 \text{ kg } 250 \text{ g} = (1 \times 1000) \text{ g} + 250 \text{ g} = 1250 \text{ g}$$

#### 2 Find the sum of the following :

4.	I mu the sum of the fon	UW	mg.					
	(a) <b>km m cm</b> (	b)	kg	3	g	(c)	) 1	ml
	17525015		20	) 5	475	5	35	562
	25017575		18	80	692	2	28	495
	+31548536		+ 2	27	005	5	+17	010
	74091126		41	3	172		81	067
3.	Subtract :					_		
	(a) m cm mm (	b)	k	-	g			ml
	10 00 1		1	5	000	)	200	000
	- 7259		_ 1	2	526	5	-175	695
	2 7 4 1			2	474	<u>4</u>	24	305
				kg		g		
4.	The weight of tomatoes		= "	8	3	250	)	
	The weight of onions		=		5	750	)	
	The weight of potatoes		_	+	7	125		
	The mergin of polutoes		-			-	_	

The total weight of Mrs Sen's vegetable shopping is 16 kg 125 g.

=

16

5. The total distance to be covered The car had a break down after Distance left to be covered  $24 \,\mathrm{km}\,250\,\mathrm{m}\,\mathrm{is}\,\mathrm{left}$  to be covered.

12

Total weight

175 000 = -150 750 = 24 250 _

1

m

125

km

ml 6. The milk bought by Shweta in first week 15 250 = The milk bought by Shweta in second week = +16175 31 425 The total milk she bought = Shweta bought 31 l 425 ml milk in two weeks.

Money

## Exercise 12.1

## 1. Find the total amount :

(a)	$2 \text{ notes of } 1000 \ (1000 \times 2)$	= ` 2 0 0 0
	$3 \text{ notes of } 500 (500 \times 3)$	= 1500
	5 notes of 50 $(50 \times 5)$	= 250
	Total Amount	$\frac{1}{3750}$
	1000011000000	
(b)	4 notes of $500 (500 \times 4)$	= `2000
	$3 \text{ notes of } 100 (100 \times 3)$	= ` 300
	10 coins of $5(5 \times 10)$	=` 5 0
	Total amount	= 2 3 5 0
	Total allocat	
(c)	$6 \text{ notes of } 500 \ (500 \times 6)$	= `3000
	$5 \text{ coins of } 10 (10 \times 5)$	=` 50
	$20 \operatorname{coins} \operatorname{of} 5(5 \times 20)$	= ` 1 0 0
	Total amount	= 3 1 5 0
(d)	50 notes of $20$ (20 × 50)	=`1000
	$12 \text{ notes of } 10 \ (10 \times 12)$	=` 120
	$30 \operatorname{coins} \operatorname{of} 5(5 \times 30)$	=` 150
	$20 \operatorname{coins} \operatorname{of} 1 (1 \times 20)$	=` 2 0
	· · · · · · · · · · · · · · · · · · ·	
	Total amount	=`1290

		20	
Exercise 12.3			

(e)	14 notes of $500 (500 \times 14)$	= 7000
	$12 \text{ notes of } 100 \ (100 \times 12)$	= 1 2 0 0
	$10 \text{ notes of } 10 \ (10 \times 10)$	<u>=`100</u>
	Total amount	= ` 8 3 0 0
(f)	80 notes of 100 \cdot (100 \times 80)	= ` 8 0 0 0
(1)		- 8000
	50 notes of $10 (10 \times 50)$	= 500
	$60 \operatorname{coins} \operatorname{of} 2 (2 \times 60)$	= 1 2 0
	$80 \operatorname{coins} \operatorname{of} 1 (1 \times 80)$	<u>=` 80</u>
	Total amount	= ` 8 7 0 0

## 2. Solve the following word problems :

(a) Aman put in his wallet:
2 notes of 1000 ` (1000 × 2) = ` 2 0 0 0
4 notes of 500 ` (500 × 4) = ` 2 0 0 0

4 notes of 500 \(500 \times 4)	=`2000
$6 \text{ notes of } 100 \ (100 \times 6)$	=` 600
Total amount	=`4600

So, total amount of money Aman have in his wallet is `4600.

(b) Meena brought:

$6 \text{ notes of } 10 (10 \times 6)$	=`60
$6 \operatorname{coins} \operatorname{of} 5 (5 \times 6)$	=`30
Total amount	=`90

The teacher asked to bring ` 100, but Meena brought ` 90. So, she did not carry enough money.

- (c) Mandira had 10 notes of  $100 (100 \times 10) = 1000$ Meenu had 20 notes of  $50 (20 \times 50) = 1000$ So, both have equal money.
- (d) In the box there are 100 coins. Half of 100 coins = (100 ÷ 2) coins = 50 coins. So there are in the box : 50 coins of `5 = (5 × 50) = `2 5 0 50 coins of `2 = (2 × 50) = `1 0 0 = `3 5 0

Therefore, there are 350 in the box.

1. Tick  $(\checkmark)$  the correct answer :

We have 1 = 100 p.So 265.05 = (265.05 × 100) p = 26505 p So, answer (a) 26505 p is correct.

2. Convert the following rupees into paise : We have 1 = 100 p, so

(a)  $27.65 = (27.65 \times 100) p = 2765 p$ (b)  $25 = (25 \times 100) p = 2500 p$ (c)  $85.44 = (85.44 \times 100) p = 8544 p$ (d)  $436.05 = (436.05 \times 100) p = 43605 p$ 

3. Convert the following paise into rupees : We have, 1 p = 1/100, so

(a) 76 paise =  $(76 \div 100)$  = `0.76

- (b)  $1500 \text{ paise} = (1500 \div 100) = 15$
- (c) 768 paise =  $(768 \div 100)$  = 7.68
- (d)  $6513 \text{ paise} = (6513 \div 100) = 65.13$

1. Make the bill in each case and find the total money due in each bill :

	Bill
1 Football	[•] 96.75
1 Whistle	2 5.80
1 Cap	` 4 8.90
Total	`171.45

The total money due in the bill is `171.45.

	B	ill	
1 Pei	ncil box	`	1 2.45
1 Tif	fin box	`	3 6.75
1 Wa	ter bottle	`	4 2.20
No	te books	`1	120.40
Tota	ıl	~ 2	211.80
			1.111

The total money due in the bill is 211.80

B	ill
1 Kurta	245.60
1 Pyjama	`110.50
1 Scarf	`128.95
Total	`485.05

The total money due in the bill is `485.05

Bill					
Books	`315.75				
Notebooks	202.70				
Pens	56.80				
Total	`575.25				

The total money due in the bill is ` 575.25.

(e)

(a)

(b)

(c)

(d)

B	ill	
Potatoes	`	36.80
Onions	`	4 2.75
Tometoes	`	26.50
Spinach	`	1 8.40
		124.45

The total money due in the bill is 124.45.

2. For each bill shown below, a 1000-rupee note was given to the shopkeeper. Find the amount returned in each case :

Bill			
Lunch box	`196.75		
Books	272.40		
Towels	304.50		
Total	773.65		
The amount given	= `1000.		
The amount due in th	ne bill $= -$ 773.		

=

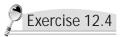
The amount returned

00

05

226.35

	(b)	Bill			
		Pens	` 2	0 8.7	5
		Notebooks	`1	0 6.4	0
		calculator	` 2	8 2.9	5
		School bag	`1	9 5.7	0
		Total	` 7	93.8	0
		The amount given		= `	1000.00
		The amount due in th	ne bill	= - `	793.80
		The amount returned		= `	206.20
2	C.I		امسما		
3.		ve the following wor	-		
	1.100	duri had in her kids ba	nk	=	225.00
		mother gave her		= .	5 0.00
		father gave her		= +	7 5.00
	Tot			=	350.00
	Ma	dhuri has` 350 now.			
	Ma	dhuri has now		= `	350.00
	She	spent on the dress		= -`	315.85
		ance money with her		=	3 4.15
	34.15 will be left with Madhuri.				
	(b)	Radhika spent on Mo	onday	= `	246.50
		She spent on Tuesda	y	= +`	483.65
		Total		= `	730.15
		Radhika had		= `	900.00
		She spent		= +`	730.15
		Balance money with	her	= `	169.85
		So, `169.85 are left		adhika	a now.



## 1. Find the cost of the following :

- (a) Here, we multiply `37.20 by 6 to find the cost of 6 books. So, the cost of 6 books is 223.20.
- (b) Here, we multiply ` 11.65 by 7 to find the cost of 7 pens. So, the cost of 7 pens is `81.55.
- (c) Here, we multiply 23.75 by 8 to find the cost of 8 bottles. So, the cost of 8 bottles is `190.00.
- (d) Here, we multiply 2.25 by 9 to find the cost of 9 erasers. So, the cost of 9 erasers is 20.25.

## 2. Find the cost of :

(a) Here, we will divide  $2500 \pm 72$  by 6 to find the cost of 1 box. The quotient is 12 which is in rupees. So, the cost of 1 box is 12.

37.	20
×	6
223.	20
_	_
	P
11.	65
×	7
8 1.	55
_	_
	P
2 3	75
×	8
19 0.	0.0

Р

P 25 2. 9 × 25

2 0.

65

- (b) Here, we will divide ` 1688 by 8 to find the cost of 1 pillow. The quotient is 211 which is in rupees. So, the cost of 1 pillow is 211.
  - $2\ 1\ 1$ 8) 1688 16 08 - 8 08 - 8 0
- (c) Here, we will divide 2512 by 4 to find the cost of 1  $\frac{628}{2512}$ jacket. ----. . . . . 4)

The quotient is 628 which is in rupees.	
So, the cost of 1 jacket is ` 628.	

	2	5	I	2	
_	2	4	_		
		I	I		
	_	-	8	_	
			3	2	
		_	3	2	
			(	0	

(d) Here, we will divide ` 693 by 9 to find the cost of 1 folder. 77 9) 693

The quotient is 77 which is in rupees. So, the cost of 1 folder is `77.

_	6	3	
		6	3
	_	6	3
	_		0

#### Solve the following word problems : 3.

(a)

(b)

(c)

lve the following word problems :	×	Ρ
Here, we first multiply `108.50 by 8 to	108.	50
find the cost of 8 books.	×	8
The product is `868.00 which is the	868.	00
cost of 8 books.	000.	00
	× 1	D
Madhu gave the shopkeeper	1000.	P 00
~	- 8 6 8.	00
Balance money	132.	
So, `132.00 will be returned.	132.	00
50, 152.00 will be returned.		
	×	Р
Shreya had	600.	0.0
-	+ 2 5 0.	00
Total money with her now	850.	00
	~	P
She bought 6 vessels each costing `	125.	70
125.70	×	6
Here, we have to multiply `125.70	754.	20
by 6 to find the cost of 6 vessels.		
The product is 754.20 which	is the	cost
of 6 vessels.	is the	cost
Now, Shreya has	- `85(	0.00
She has to pay		4.20
Money will be left with her		5.80
So, \$95.80 will be left with Shreya now.		5.00
50, 55.00 will be left with Sine yanow.		
Here we will divide `1856 by `8 to find		232 856
the number of toy cars.		
The quotient is 232 which is the number	<u>-1</u>	$\frac{6}{25}$
of toy cars.		$\frac{23}{24}$
So, 232 toy cars can be bought for `1850	<u>_</u>	<u></u> 16
		-16
		$\frac{10}{00}$



636 12) 7632

72

4

36

72 72

0

Р

90

30

60

63.

4 2.

2 1.

	(d)	find the number of pens. $-1$	$     \frac{246}{726}     \frac{4}{32}     \frac{28}{46}     \frac{-42}{4}     $
		Revision	
1.	Fin	nd the total amount :	
	(a)	$\begin{array}{rcl} 30 \text{ notes of } 50\ (50 \times 30) & = \ 1500 \\ 20 \text{ notes of } 20\ (20 \times 20) & = \ 400 \\ 90 \text{ coins of } 5\ (5 \times 90) & = \ 450 \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ \end{array}$	) )
	(b)	$12 \text{ notes of } 500 = (500 \times 12)$ = $6000$ $10 \text{ notes of } 100 = (100 \times 10)$ = $1000$ $13 \text{ notes of } 10 = (10 \times 13)$ = $130$ Total amount= $7130$	
2.	(a)	Bill           Dress         3 8 5.50           Raincoat         1 5 6.75           Shoes         2 8 0.40           Socks         4 6.80           Total         8 6 9.45	
			0.00 0.45 0.55
	(b)	Books $101.75$ Notebooks $68.70$ Pens $32.90$ Erasers $12.40$ Total $215.75$ The money given to shopkeeper $= 1000$ The money due in the bill $= 215$	0.00 5.75 4.25
3.	Fin (a)	ad the cost of : $112.80 \text{ by}$ Here, we multiply ` 112.80 by1 1 2.8 to find to cost of 8 boxes. $\times$ The product is ` 902.40 which9 0 2.	P 80 8 40
	(b)	Here, we multiply ` 105.20 by 6 to find to cost of 6 bags.105.The product is ` 631.20 which is the cost of 6 bags. $\times$	P 20 6 20

(c) Here, we will divide `4560 by 15 to find the cost of 1 pair of shoes. The quotient is 304 which is in rupees.

So, the cost of 1 pair of shoes is ` 304.00. (d) Here, we will divide `7632 by 12 to find the cost of 1 shirt The quotient is 636 which is So, the cost of 1 shirt is `636. 372.60

45

-60 0

77.00 449.60 So, `450.00>`449.60 Therefore, the amount `450 is greater.

5. Here, we will find the difference between `42.30 and `63.90 So, the difference ` 21.60 is not greater than ` 29, i. e., `29>`21.60 Therefore, the answer is 'No'.

## 6. Fill in the blanks :

4.

(a)	8 notes of `100 means.
	a total of $(100 \times 8) = 800$
(b)	4 notes of 50 means

- a total of  $(50 \times 4) = 200$ (c) 5 notes of 20 means
  - a total of  $(20 \times 5) = 100$
- (d) 2 notes of 500 means a total of  $(500 \times 2) = 1000$

## 7. Find out the cost of :

- (a) Here, we multiply `100 by 4 to find the cost of 4 books.  $(100 \times 4) = 400$ So, the cost of 4 books is 400.
- (b) Here, we will divide ` 600 by 6 to find the cost of one box.  $(600 \div 6) = 100$ So, the cost of 1 box is ` 100.
- (c) Here, we will divide `35 by 7 to find the cost of 1 pen.  $(35 \div 7) = 5$ So, the cost of 1 pen is 5.



Time

## Exercise 13.1

1. Write the time :

13

- (a) 2:00 or 2 o'clock(b) half past 10
- (c) 10 minutes to 8 (d) 25 minutes past 7
- 2. Do Yourself.



1.	Fill in the blanks			
	(a) a.m.	(b) p.m.	(c)	a.m.
	(d) a.m.	(e) p.m.	(f)	a.m.

- 2. Tell the time :
  - (a) 3 p. m.
  - (b) 11:30 p. m.: 12 midnight 30 minutes = 11:30 p. m.
  - (c) 2:00 a. m.: 11 p. m. + 1 hour = 12 midnight + 2 hours =`2:00 a. m.
  - (d) 4:15 a. m.: 5:05 a. m. 50 minutes` 4:15 a. m.
  - (e) 12 : 20 a. m. : 8 p. m. + 4 hours = 12 : 00 midnight + 20 minutes ` 12 : 20 a. m.

### 3. Use 24-hour clock to express the time :

- (a) 06:15 hours (b) (12:00+5:45=)17:45 hours
- (c) 10:30 hours (d) (12:00+8:40=)20:40 hours
- (e) 00:05 hours 04:05 hours
- (f) 23:30 hours: 12:00 noon + 11:30 hours =`23:30 hours

### 4. Use 12-hour clock to express the time :

- (a) 2:40 a.m. : 12 midnight + 2:40 hours 2:40 a.m.
- (b) 8:00 p.m. : 12 noon + 8:00 hours 8 000 p.m.
- (c) 12:15 a.m.: 12 midnight + 0.15 hours 12:15 a.m.
- (d) 9:28 p.m. :  $12 \text{ noon} + 9: 28 \text{ hours} \ 9:28 \text{ p.m.}$
- (e) 11:40 a.m. : 12 midnight + 11:40 hours 11:40 a.m.
- (f) 4:45 p.m. : 12 noon + 4:45 hours 4:45 p.m.

## Exercise 13.3

## 1. Find the time duration between :

(a)  $11:10 \text{ a.m.} \xrightarrow{50 \text{ minutes}} 12 \text{ noon} \xrightarrow{6 \text{ hours } 10 \text{ minutes}} 6:10 \text{ p.m.}$ The time duration = 50 minutes + 6 hours 10 minutes = 6 hours 60 minutes = 7 hours

(b) 
$$10:30 \text{ a.m.} \xrightarrow{1 \text{ hour } 30 \text{ minutes}} 12 \text{ noon } \xrightarrow{2 \text{ hours } 30 \text{ minutes}} 2:30 \text{ p.m.}$$

The time duration = 1 hour 30 minutes + 2 hours 30 minutes = 3 hours 60 minutes = 4 hours

(c)  $3:40 \text{ a.m.} \xrightarrow{20 \text{ minutes}} 4:00 \text{ a.m.} \xrightarrow{8 \text{ hours}} 12 \text{ noon}$ 

6 hours 20 minutes 6 p.m.

The time duration = 20 minutes + 8 hours + 6 hours 20 minutes

= 14 hours + 40 minutes

(d)  $8:20 \text{ a.m.} \xrightarrow{9:00 \text{ a.m.}} 10:45 \text{ a.m.}$ 10:45 a.m.

The time duration = 40 minutes + 1 hour 45 minutes= 1 hour + 85 minutes

- = 1 hour + 85 minutes= 2 hours 25 minutes
- = 2 Hours 25 Himutes
- (e)  $5:16 \text{ a.m.} \xrightarrow{44 \text{ minutes}} 6:00 \text{ a.m.} \xrightarrow{4 \text{ hours } 48 \text{ minutes}} 10:48 \text{ a.m.}$ The time duration = 44 minutes + 4 hours 48 minutes
  - =4 hours +92 minutes

= 5 hours 32 minutes

(f)  $12 \operatorname{noon} \xrightarrow{9:38 \text{ p.m.}} 9:38 \text{ p.m.}$ 9 hours 38 minutes

The time duration = 9 hours 38 minutes

### 2. What will be the time? Use 'a.m.' or 'p.m.':

- (a) 1 hour after 6 : 20 p.m. is 7 : 20 p.m. 10 minutes after 7 : 20 p.m. is **7 : 30 p.m.**
- (b) 2 hour after 11 : 40 a.m. is 1 : 40 p.m. 5 minutes after 1 : 40 p.m. is **1 : 45 p.m.**
- (c) 45 minutes after 3 : 10 p.m. is **3 : 35 p.m.**
- (d) 20 minutes after 11 : 50 p.m. is 12 : 10 a.m.
- (e) 2 hours after 2 : 25 p.m. is 4 : 25 p.m. 2 minutes after 4 : 25 p.m. is **4 : 27 p.m.**
- (f) 1 hour after 7 : 20 p.m. is 8 : 20 p.m. 40 minutes after 8 : 20 p.m. is **9 : 00 p.m.**

## 3. Solve the following :

(a) 8:20 a.m.  $\xrightarrow{9:00 \text{ a.m.}} \xrightarrow{9:00 \text{ a.m.}} \xrightarrow{6 \text{ hours 30 minutes}} 3:30 \text{ p.m.}$ 

So, Madhu is away form home = 40 minutes + 6 hours 30 minutes

= 6 hours 70 minutes

= 7 hours 10 minutes

- (b) 40 minutes after 6:40 a.m. is 7:20 a.m. So, Gurmeet will return at 7:20 a.m.
- (c) 1 hour after 10:45 a.m. is 11:45 a.m.
   20 minutes after 11:45 is 12:05 p.m.
   So, Mrs Singh returned at 12:05 p.m.
- (d)  $4:10 \text{ p.m.} \xrightarrow{50 \text{ minutes}} 5:00 \text{ p.m.} \xrightarrow{1 \text{ hour 5 minutes}} 6:05 \text{ p.m.}$

The time duration = 50 minutes + 1 hour 5 minutes= 1 hour 55 minutes So, Rita was away for 1 hour 55 minutes.

(e)  $10: 20 \text{ a.m.} \xrightarrow{40 \text{ minutes}} 11: 00 \text{ a.m.} \xrightarrow{3 \text{ hours } 50 \text{ minutes}} 2: 50 \text{ p.m.}$ 

The time duration = 40 minutes + 3 hours 50 minutes = 3 hours + 90 minutes = 4 hours 30 minutes

So, vendor is away on round for 4 hours 30 minutes.

(f) 3 hours after 3: 10 p.m. is 6: 10 p.m.
10 minutes after 6: 10 p.m. is 6: 20 p.m.
So, the film will get over at 6: 20 p.m.

## Exercise 13.4

- 1. Answer the following :
  - (a) There are 365 days in a year.



- (b) There are 366 days in a leap year.
- (c) April, June
- (d) July, August
- (e) February has 29 days in a leap year.
- 2. Write the following dates in short form :
  - (a) 10.05.2008 (b) 15.04.2010
  - (c) 14.07.2013 (e) 15.08.2014
- 3. Find the number of days between :
  - (a) From 8 January to 14 February = 38 days So, the number of days between 7 January and 15 February is 38.
  - (b) From 29 March to 15 may = 48 daysSo, the number of days between 28 March to 16 May is 48.
  - (c) From 22 October to 9 December = 49 daysSo, the number of days between 21 October to 9 December is 49 days.
  - (d) Between Teacher's Day and Children's Day = Between 5 September and 14 November = From 6 September to 13 November = 69 days So, the number of days between Teacher's Day and Children's Day is 69.
  - (e) Between Christmas Day and Republic Day = Between 25 December and 26 January = From 26 December to 25 January = 31 Days So, the number of days between Christmas Day and Republic Day is 31.

## 4. Solve the following word problems :

- (a) Ishaan's last working day was 16 July. He took 23 day of leave form office. So his first day of leave 17 July. And his last day of leave = 8 August. So, Ishaan will have to join on 9 August.
- (b) Meena's aunt reached on 10 May. So, her visit start on 10 May and she took 54 days including 10 May, for her visit. Therefore, Meena's aunt would be leaving for her visit on 18 March.
- (c) Maninder's 21 days camp finished on 30 May. So, his camp took 21 days back including 30 May, to begin.

Therefore, Maninder's 21 days camp began in 10 May.

- (d) Swati joined school on 4 January. She took 14 days for a winter break before 4 January = From 21 December to 3 January. Therefore, the last working day of Swati's school was 20 December.
- (e) Do yourself.

## Revision

(d) a.m.

68

- 1. Write the exact time should in the clock : (c) 9:32 (a) 7:11 (b) 7:24
- 2. Fill in the blanks with a.m. or p.m. : (c) p.m.
  - (a) p.m. (b) a.m.
- 3. Write the time for each of the following :
  - (a) 2 hours after 10:10 a.m. = 12:10 p.m.
  - (b) 3 hours after 7:14 p.m. = 10:14 p.m.
  - (c) 2 hours before 1:30 a.m. = 11:30 p.m.
  - (d) 1 hour before 12:15 p.m. = 11:15 a.m.

## 4. Find the time duration between :

(a)  $6:10 \text{ a.m.} \xrightarrow{7:00 \text{ a.m.}} 3 \text{ hours } 20 \text{ minutes}$ → 10 : 20 a.m.

The time duration = 50 minutes + 3 hours 20 minutes = 3 hours + 70 minutes

=4 hours 10 minutes

(b) 4:15 p.m.  $\xrightarrow{45 \text{ minutes}} 5:00 \text{ p.m.}$   $\xrightarrow{5 \text{ hours 10 minutes}} 10:10 \text{ p.m.}$ 

The time duration = 45 minutes + 5 hours 10 minutes 5 hours 55 minutes

(c) 9:40 a.m.  $\xrightarrow{20 \text{ minutes}}$  10:00 a.m.  $\xrightarrow{4 \text{ hours 10 minutes}}$  2:10 p.m.

The time duration = 20 minutes + 4 hours 10 minutes = 4 hours 30 minutes

(d) 10:45 p.m.  $\xrightarrow{15 \text{ minutes}}$  11:00 p.m.  $\xrightarrow{1 \text{ hours 20 minutes}}$  12:20 p.m.

The time duration = 15 minutes + 1 hours 20 minutes =1 hours 35 minutes

## 5. Find the number of days between :

- (a) Between 16 March and 11 May = From 17 March to 10 May = 55 days
- (b) Between 22 May and 3 July = From 23 May to 2 July = 41 days
- (c) Between 21 August and 9 October
  - = Form 22 August to 8 October = 48 days
- (d) Between 23 September and 21 November = 24 September to 20 November = 58 days

#### Solve the following word problems : 6.

(a) Priya left home at 7:45 a.m. She takes 35 minutes to reach school. So, she will reach at = 7:45 a.m. + 35 minutes = 8:20 a.m.

Therefore, Priya will reach school at 8:20 a.m.

(b) Duration of Monika's camp was 25 days from 20 October.

=13 November

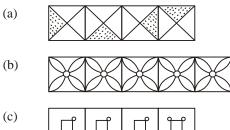
So, the last days of the camp was 13 November.

(c) Prerna's 45-days vacation ended on 25 June. The last working day of Prerna's school was 11 May.

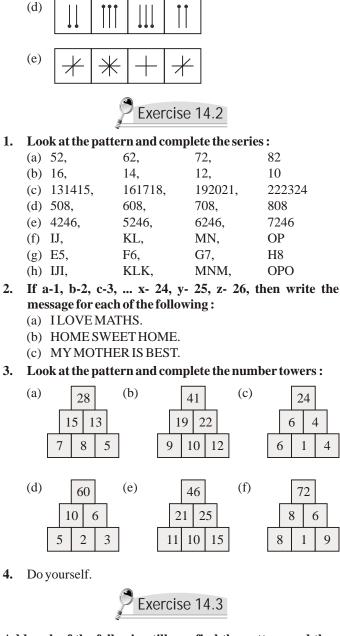
14) Patterns

Exercise 14.1

## **Extend the following patterns :**

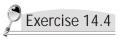






Add each of the following till you find the pattern and then complete without calculating :

1. 1 + 2 + 3 + 4 + 5 = 15**2.** 1+3=4= 201 + 3 + 5 = 92 + 3 + 4 + 5 + 63 + 4 + 5 + 6 + 7=25 1 + 3 + 5 + 7 = 164 + 5 + 6 + 7 + 8= 30 1 + 3 + 5 + 7 + 9 = 255+6+7+8+9=35 1 + 3 + 5 + 7 + 9 + 11 = 366+7+8+9+10 = 401 + 3 + 5 + 7 + 9 + 11 + 13 = 497 + 8 + 9 + 10 + 11 = 451+3+5+7+9+11+13+15=643. 2+4=6**4.** 1+2+3+4=102 + 4 + 6 = 122 + 3 + 4 + 5 = 142+4+6+8=203+4+5+6=182+4+6+8+10=304+5+6+7=22



- 1. Find out the shapes that tesselate : (a) d. (e)
- 2. Do your self.

	_	Rev	ision –	
1.	Look at the pat	tern and	write the r	next 4 terms of the
	series in each of	f the follo	wing :	
	(a) 120,	140,	160,	180
	(b) 87,	97,	107,	117
	(c) 70,	65,	60,	55
	(d) 555,	666,	777,	888
	(e) Ee,	Ff,	Gg,	Hh
	(f) V6,	U5,	T4,	<b>S</b> 3
2.	Complete the nu	umber tow	vers:	
	(a) 36	(b)	80	(c) 147
	17 19		8 10	21 7
	9 8 11	4	2 5	3 7 1
3.	Identify the patt	ern and c	omplete the	number sequence :
	(a) $1+3+5+7$	= 16	5 (b)	) $1 \times 11 = 11$
	3+5+7+9	= 24	1	$2 \times 11 = 22$
	5 + 7 + 9 + 11	= 32	2	$3 \times 11 = 33$
	7 + 9 + 11 + 1			$4 \times 11 = 44$
	9+11+13+			$5 \times 11 = 55$
4.	Do yourself.			
5.	Do yourself.			
	2			
	(15)			Data Handing
				Bata hanang

## Exercise 15.1

1. The heights of the students in Shrikant's class are given in the box. Work with a friend to fill this chart from the data in the box :

Height	Tally mark	Number	01. 109 cm ⁰ 2. 115 cm 03. 112 cm
Below	[14] II	7	04. 115 cm 05. 108 cm 06. 109 cm
110 cm			07. 119 cm 8. 112 cm 9. 120 cm
			10. 114 cm 11.115 cm 12. 108 cm
			13. 112 cm 14. 122 cm 15. 119 cm
110 cm to	[11] [71] [71]	13	16. 109 cm 17. 113 cm 18. 121 cm
120 cm			19. 123 cm 20. 108 cm 21. 114 cm
Above	1111	6	22. 124 cm 23. 117 cm24. 107 cm
120 cm			25. 124 cm 26. 121 cm

Make a bar graph by colouring squares

(1 square = 2 students) and answer the following questions :

- (a) The greatest number of students are 13(110-120).
- (b) The least number of students are 6 (above 120).
- (c) The fraction of the total number whose heights are between 110 cm and 120 cm is  $\frac{13}{26} = \frac{1}{2}$ .
- (d) The number of students above 120 cm is 6.

- The difference between the population of city 'A' and city 'B' in 2000 = 1.60.00.000 1.30.00.000
- 2. This is a part of poem by H.W. Longfellow. Read it and find the word that is used most often. Choose from possible words like 'I', 'it' 'to' and 'the'. Then make a table like the one here and decide :

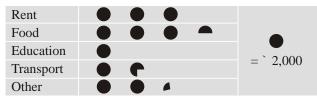
	Tally marks	Number
Ι		4
it	THI I	6
to	111	3
the		4

3. Divide the alphabet into five groups. Take the names of any 30 classmates and see how many names start with the letters of each group. Make a chart like this :

A to E	F to J	K to O	P to T	U to Z
	1111	111.171	INI	

According to the chart, answer the following questions :

- (a) Most names start with letters of the group : A to E. Number of names in the group = 12.
- (b) The group of letter with the least names is : U to Z. Number of names in the group = 2.
- 4. The following pictograph shows how much a family spends on different things every month :



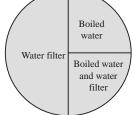
- (a) What does the family spend the most on? Food ( 7000 )
- (b) How much does it spend on transport? (2000 + 1500)
- (c) How much does it spend in total?  23,000
- (d) If the family earns 25,000 every month, how much does it save? = (25,000-23,000) = 2000
- 5. Fill this pictograph to show how many children took part in different events on sports Day. Use ⊖ to show 15 children. The numbers are given in the second column:

Event	$\bigcirc$	Number
Races	$\bigcirc \bigcirc $	75
Jumps	$\bigcirc \bigcirc $	65
Swimmig	$\bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc$	55
Karate	$\bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \diamond$	50

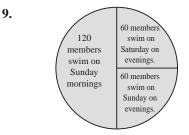
- 6. Do yourself.
- 7. The bar graph shows the population (number of people) of three cities, A, B and C, in the years 2000 and 2010. Each square stands for 20,00,000 people.
  - (a) City 'B' had the highest population in 2000. It was (20,00,000 × 8=) 1,60,00,000.
  - (b) The population of city 'A' in 2000 = 1,30,00,000 The population of city 'B' in 2000 = 1,60,00,000

city 'B' in 2000 = 1,60,00,000 - 1,30,00,000= 30,00,000

- (c) In the city 'B' the population increased the most from 2000 to 2010
- (d) Cities 'B' and 'C' had the same increase in population in the ten years.
- 8. Arif's class formed 5 groups. Each group asked 20 families how they make sure that their drinking water is safe. Then the 5 groups put together their data and make this pie chart :



- (a) Arif's class questioned  $(5 \times 20 =) 100$  families.
- (b) 25 of the families use only boiled water.
- (c) 50 of the families use only water filters.
- (d) 25 of the families use boiled water and water filters.



10. Do yourself.



## Large Numbers

## Exercise 1.1

## 1. Write the numbers in words :

1

- (a) Seventy-nine lakh seventy-two thousand forty-six.
- (b) Thirty-two lakh forty thousand two hundred forty.
- (c) Nine crore eighty-seven lakh twenty-four.
- (d) Six crore thirty-five lakh ninety-two thousand four.
- (e) Eighty-one crore ten lakh two hundred forty-three.
- (f) Twenty crore thirty lakh forty thousand five hundred sixty.

## 2. Write the number-names in figures :

- (a) 24,32,019 (b) 70,81,405
- (c) 9,00,22,608 (d) 6,42,09,016
- (e) 86,75,00,692 (f) 30,00,72,007

## 3. How many numbers have :

- (a) 5 digit
  - Greater 5-digit number = 99999
  - Greater 4- digit number = 9999

Number of 5-digit numbers = 99999 – 9999 = 90000

- (b) 8 digit
  - Greater 8- digit number = 99999999 Greater 7- digit number = 99999999 Number of 8-digit numbers = 99999999 – 9999999 = 90000000

## 4. Write the next three numbers in the sequence :

- (a) 3523072, 3524072, 3525072
- (b) 5730034, 5740034, 5750034
- (c) 48510248, 49510248, 50510248
- (d) 43850962, 53850962, 63850962

## 5. Find the digit at :

- (a) The digit at 7th place = 2 (b) The digit at 8th place = 9
- (c) The digit at 6th place = 4 (b) The digit at 9th place = 5

## 6. Fill in the blanks :

- (a) Hundreds (b) Ten crores
- (c) 10000000 = Ten crore (d) 6(six)
- (e) Hundreds
- (f) Ten crores, crores



- 1. Find the place value of the highlighted digits :
  - (a)  $8 \times 100 = 800$
- (b)  $9 \times 10000 = 90000$
- (c)  $8 \times 10000 = 80000$  (d)  $9 \times 1000000 = 9000000$
- (e)  $3 \times 10000 = 30000$  (f)  $9 \times 100 = 900$
- 2. Do yourself
- 3. Write the expanded form and find the place value of 8 in each case :
  - (a) 3280065 = 3000000 + 200000 + 80000 + 60 + 5 Place value of 8 = 80000

- (b) 3200685 = 3000000 + 20000 + 600 + 80 + 5
   Place value of 8 = 80
- (c) 32650408 = 30000000 + 2000000 + 600000

+50000+400+8

## Place value of $8 = 8 \times 1 = 8$

- 4. Write the numbers in short form :
  - (a) 7,03,89,024 (b) 65,00,00,271
  - (c) 49,60,005 (d) 3,00,00,408

Exercise 1.3

## 1. Compare the numbers using '<, > or = ':

- (a) >: First number has 7 digit, last number has 6 digits. 7 digits > 6 digits
- (b) <: First number has 1 at Lakhs place, last numbers has 5 at lakhs place.
  - 1 < 5
- (c) =: Both numbers are the same.
- (d) >: First number has 2 at lakhs place, last numbers has 0 at lakhs place.
   2>0
- 2. Write the numbers in ascending order :
  - (a) 3246390, 3463092, 4639203, 4963203
  - (b) 51871923, 57811329, 58931172, 59321781
- **3.** Write the numbers in descending order : (a) 69003420, 63002049, 60009423, 6003249
- 4. Form the greatest and smallest number (by using) the digits only once :
  - (a) 3,2,4,5,0,9,1 Greatest number = 9543210 Smallest number = 1023459
  - (b) 5,7,8,9,9,3,2,4
     Smallest number = 23457899
     Greatest number = 99875432
  - (c) 8, 2, 9, 3, 1, 6, 4, 4
     Greatest number = 98644321
     Smallest number = 12344689

## 5. From the greatest and smallest 7-digit number you can repeat the digits :

(a) 4, 2, 1, 3

The greatest number is 4444321 (greatest digit is repeated). The smallest number is 1111234 (smallest digit is repeated).

(b) 5, 6, 7, 0, 8

The greatest number is 8887650 (greatest digit is repeated). The smallest number is 5000678 (smallest digit is repeated).

(c) 9,7,0,2,1

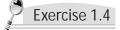
The greatest number is 9997210 (greatest digit is repeated). The smallest number is 1000279 (smallest digit is repeated).

#### Write the successor of these numbers : 6.

- (a) Successor: 32846213 + 1 = 32846214
- (b) Successor: 98710043 + 1 = 98710044
- (c) Successor: 65602468 + 1 = 65602469

## 7. Write the predecessor of these numbers :

- (a) Predecessor: 73210056 1 = 73210055
- (b) Predecessor: 6320415 1 = 6320414
- (c) Predecessor: 44328463 1 = 44328462



- 1. Write the numbers in words according to the international system :
  - (a) 4520320

Four million five hundred twenty thousand three hundred twenty.

(b) 968040

Nine hundred sixty-eight thousand forty.

(c) 52113262

Fifty-two million one hundred thirteen thousand two hundred sixty-two.

(d) 725620720

Seven hundred twenty-five million six hundred twenty thousand seven hundred twenty.

(e) 5220724

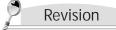
Five million two hundred twenty thousand seven hundred twenty-four.

(f) 324629

Three hundred twenty-four thousand six hundred twenty-nine.

## 2. Write the numbers in figures :

(a) 72,096,208 (b) 864,000,029 (c) 91,674,000



1. 72900462 = Seven crore twenty-nine lakh four hundred sixty-two.

351164090 = Thirty-five crore eleven lakh sixty-four thousand ninety.

- 2. Write the numbers given in following sentences in figures :
  - (a) 34,06,048 (b) 9,20,07,031
- 3. Form a number with the following :

(a) 80.17.230 (b) 8.07.02.594

4. Write the following numbers in Indian place value chart and find the place value of 4 in each case :

S.No.	Number	Indian Place Value Chart							Place value of 4		
5.110.	Number	C	TL	L	T-Th	Th	Н	Т	0	Flace value of 4	
(a)	97 <u>40</u> 8092	9	7	4	0	8	0	9	2	$4 \times 100000 = 400000$	
(b)	29760 <u>40</u> 0	2	9	7	6	0	4	0	0	$4 \times 100 = 400$	
(c)	<u>45</u> 110629	4	5	1	1	0	6	2	9	$4 \times 10000000 = 40000000$	
(d)	32 <u>46</u> 036		3	2	4	6	0	3	6	$4 \times 10000 = 40000$	
(e)	9359 <u>46</u> 3		9	3	5	9	4	6	3	$4 \times 100 = 400$	
(f)	5 <u>49</u> 99365	5	4	9	9	9	3	6	5	$4 \times 1000000 = 4000000$	

- 5. Write the following numbers in expanded form. Also find the sum of place value of 2 in each case :
  - (a) 27640279 = 20000000 + 7000000 + 600000 + 40000+200+70+9
    - Sum of place value of 2 = 20000000 + 200 = 20000200
  - (b) 12344321 = 10000000 + 2000000 + 300000 + 40000+4000+300+20+1
  - Sum of place value of 2 = 2000000 + 20 = 2000020(c) 796224024 = 700000000 + 90000000 + 6000000
  - +200000+20000+4000+20+4Sum of place values of 2 = 200000 + 20000 + 20 = 220020
  - (d)  $\underline{2}6499\underline{2}9 = 2000000 + 6000000 + 40000 + 9000 + 900$ +20+9Sum of place value of 2 = 2000000 + 20 = 2000020
  - (e)  $3\underline{2}983\underline{62} = 3000000 + 200000 + 90000 + 8000 + 300$ +60+2

Sum of place value of 2 = 200000 + 2 = 200002

(f) 52726939 = 50000000 + 2000000 + 700000 + 20000+6000+900+30+9

Sum of place value of 2 = 2000000 + 20000 = 2020000

- 6. Form the greatest 8-digit number if : (a) 98654327
  - (b) 98076541
- Write the following numbers in International place 7. value chart :

C M-	Number	International Place Value Chart									
S.No.	Number	TM	М	H-Th	T-Th	Th	Н	Т	0		
(a)	27400649	2	7	4	0	0	6	4	9		
(b)	21140079	2	1	1	4	0	0	7	9		
(c)	52887930	5	2	8	8	7	9	3	0		

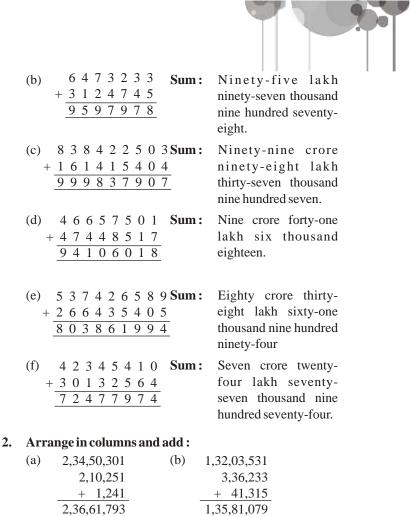
2)

**Roman Numerals** 



## 1. Write the following in Hindu-Arabic numerals :

(	(a)	XXIV	= 24	(b)	XVI	=16
(	(c)	XXVIII	= 28			
(	(d)	XXXVI	= 36	(e)	XXXIX	= 39
(	(f)	XLII	= 42			
(	(g)	XIV	= 54	(h)	LXXII	= 72
(	(i)	LXIV	= 64			
(	j)	XCI	= 91	(k)	LXXXIX	= 89
(	(1)	LXVIII	= 68			
(	(m)	XCVI	= 96	(n)	LXIX	= 69
(	(0)	LVIII	= 58			
(	(p)	XLIV	=44	(q)	LIII	= 53
(	(r)	LXV	=65			
(	(s)	XXV	=25	(t)	XVIII	=18
(	(u)	XCV	=95			
(	(v)	С	=100	(w)	XL	=40
(	(x)	LV = 55				
(	(y)	XCVII	=97	(z)	XCIX	=99



	$\frac{+ 1,241}{2,36,61,793}$		$\frac{+ 41,315}{1,35,81,079}$
(c)	30,41,43,552 12,42,85,531 + 33,41,032 43,17,70,115	(d)	51,21,43,250 3,40,12,523 + 1,21,29,08,874 1,75,90,64,647
(e)	14,16,98,4503,75,19,162+ 17,31,25918,09,48,871	(f)	25,16,17,343 2,12,67,932 + 11,12,35,651 38,41,20,926

2,34,50,301

2,10,251

(a)

31,41,614 (g) 2,33,60,632 + 42,88,16,121 45,53,18,367

(b)

#### 3. Solve the following problems :

(a)	Spare parts produced in $2012 =$	53,42,56,739
	Spare parts produced in $2013 =$	+ 43,72,68,731
	The total parts produced =	97,15,25,470

Therefore, 97,15,25,470 spare parts were produced in the two years by the factory.

(b) Copies of books sold in the world book fair = 84,25,851Copies of books sold in India book fair =  $\frac{+22,31,999}{-100}$ The total copies of book  $=\overline{1,06,57,850}$ 

Therefore, 1,06,57,850 copies of books were sold in both the book fairs.

2.	Write the following i	n Roman Numerals :

withe the following in	
(a) 13 = XIII	(b) $17 = XVII$
(c) $27 = XXVII$	
(d) $38 = XXXVIII$	(e) $26 = XXVI$
(f) $40 = XL$	
(g) 46 = XLVI	(h) $55 = LV$
(i) 53 = LIII	
(j) $63 = LXIII$	(k) $79 = LXXIX$
(l) $81 = LXXXI$	
(m) $67 = LXVII$	(n) $57 = LVII$
(o) 66 =LXVI	
(p) 86 =LXXXVI	(q) $98 = XCVIII$
(r) $84 = LXXXIV$	
(s) $78 = LXXVIII$	(t) $93 = XCIII$
(u) $87 = LXXXVII$	
(v) $73 = LXXIII$	(w) $82 = LXXXII$
(x) 99 = XCIX	
(y) $100 = C$	(z) $59 = LIX$
Solve the following a	and write your answers in roman
numerals :	
(a) $6 \times 9 = 54 = LIV$	

- (b)  $LXXV \div V = (75 \div 5 = 15) = VL$
- (c) 71 + 8 = 79 = LXXIX

3.

- (d)  $XV \times III = (15 \times 3 = 45) = VL$
- (e) LXXX XXIV = (80 24 = 56) = LVI
- (f) XXV + XXXV = (25 + 35 = 60) = LX
- (g) XCV XLII = (95 42 = 53) = LIII
- (h)  $XXV \times II = (25 \times 2 = 50) = L$
- (i) 35+45=80=LXXX
- (i) 55 + 23 = 78 = LXXVIII
- 4. Fill in the blanks with the correct number in roman numerals :
  - (a)  $XLIII \underline{III} = XL(43 3 = 40)$
  - (b) LX XL = XX(60 40 = 20)
  - (c)  $XX + \underline{XV} = XXXV(20 + 15 = 35)$
  - (d)  $XXX \div XXX = I(30 \div 30 = 1)$
  - (e)  $C \div II = L(100 \div 2 = 50)$
  - (f)  $LXXII \div IX = VIII (72 \div 9 = 8)$
  - (g)  $L \times II = C (50 \times 2 = 100)$
  - (h)  $XX + V = \underline{XXV}(20 + 5 = 25)$
- 5. Fill in the box with >, < or = :
  - (a) XX + XXX = L(20 + 30 = 50)
  - (b)  $120 45 \le LXXXV(120 45 = 75; 75 < 85)$
  - (c)  $LXX LX \ge IX(70 60 = 10; 10 > 9)$
  - (d)  $D+D \equiv M (500+500=1000; 1000=1000)$
  - (e)  $LIV \le LVI(54 < 56)$
  - (f)  $LXXXVIII + X \le XCIX(88 + 10 = 98; 98 < 99)$

3

Four Operations

## Exercise 3.1

### 1. Add the following and write the sum in words :

(a)		2	4	5	1	4	8	Sum :	Six lakh seventy-seven			
	+	4	3	2	0	3	0		thousand one hundred			
		6	7	7	1	7	8		seventy-eight.			



	(c)	The cost of the flat = $23,92,671$
		The cost of interior decoration and furnishing = $5,00,971$
		The cost of the car = $+$ $6,76,842$
		The total money spent = $35,70,484$
	(d)	The men in the state = $2,87,45,816$
		The women in the state = $2,82,08,788$
		The children in the state = $+1,68,94,593$
		The total population = $7,38,49,197$
		Therefore, the total population in the state is 7,38,49,197
	(e)	The money spent in first year = $3,27,75,812$
		The money spent in second year = $62,79,841$
		The money spent in third year = $+3,28,72,093$
		The total money spent = $7,19,27,746$
		Therefore, the total money spent by the district
		administration during the period is `7,19,27,746
	4.	Do yourself
		Exercise 3.2
1.	Tic	$k(\checkmark)$ the correct answer :
	(a)	(ii) 46,79,822 (b) (ii) 2,25,596
2.	Sul	otract the following :
	(a)	7030049 (b) 71234548 (c) 25598218
		-1591125 $-18547665$ $-9875380$
2	C1	<u>5438924</u> <u>52686883</u> <u>15722838</u>
3.		otract and check the answer : Subtraction : Checking :
	(a)	8,98,99,898 6,65,75,575 → Difference
		$-2,33,24,323 + 2,33,24,323 \longrightarrow$ Subtrahend
		$\frac{2,22,23,222}{6,65,75,575} \qquad \boxed{8,98,99,898} \longrightarrow \text{Minuend}$
		We have, Difference + Subtrahend = Minuend.
		So, our answer is correct.
	(b)	Subtraction: Checking:
		9,87,54,325 2,52,78,754 → Difference
	_	$+7,34,75,571$ $+7,34,75,571$ $\rightarrow$ Subtrahend
		2,52,78,754 9,87,54,325 → Minuend
		We have, Difference + Subtrahend = Minuend.
	<i>(</i> )	So, our answer is correct.
	(c)	<i>Subtraction : Checking :</i> 7,63,46,619 1,50,91,832 → Difference
		$-6,12,54,787 + 6,12,54,787 \longrightarrow$ Subtrahend
		$\frac{(5,12,5,1,767)}{(1,50,91,832)} \xrightarrow{(1,0,72,5,1,767)} (1,0,72,5,1,767) \xrightarrow{(1,0,72,5,1,767)} (1,0,72,5,1,767)$
		We have, Difference + Subtrahend = Minuend.
		So, our answer is correct.
	(d)	Subtraction : Checking :
	. /	85,76,248 26,31,421 → Difference
		$-59,44,827 + 59,44,827 \longrightarrow$ Subtrahend
		26,31,421 85,76,248 → Minuend
		We have, Difference + Subtrahend = Minuend.
		So, our answer is correct.
4.	Fin	d the missing digits :

#### (b) (a) 4 4 7 6 0 7 8 7 2 2 4 4 3 8 0 -1218149 33494715 38749665 3 2 5 7 9 2 9

(c)	9 3 7 0 5 5 4 1
	-58642757
	3 5 0 6 3 7 8 4

### 5. Solve the following :

(a)	9,86,53,210
	-7,54,310
	9,78,98,900

Therefore, the difference in both of largest numbers is 9,78,98,900

(b)	The number of bottles of cold drink
	sold in summer = $5,88,79,462$
	The number of bottles $-3,38,45,871$
	of cold drink sold in winter = $\frac{2,50,70,71}{2,50,33,591}$
	The more bottles sold in summer
	than in winter =
	Therefore, 2,50,33,591 more bottles of cold drink
	were sold in summer than in winter.
(c)	The quantity of basmati rice = $5,84,768$ tons
	The quantity of normal rice = $-3,86,970$ tons
	More quantity of basmati rice = $1,97,798$ tons
	Therefore the basmati rice is more and by 1,97,797
	tons.
(d)	5
	The number of literate girls = $-3,50,256$
	More number of literate boys = $6,19,509$
	Therefore, 6,19,509 more boys are literate in
con	nparison to the girls.
(e)	The quantity of mangoes the state produces =
	The quantity of exported mangoes =
	The balance quantity $=$
	Therefore, 58,91,639 tons of mangoes are left.

95,67,876 tons - 36,76,237 tons 58,91,639 tons

### 6. Fill in the blanks :

- (a) 1,48,33,669+0=1,48,33,669
- (b) 4,83,267+83,297=83,297+4,83,267
- (c) 0+1,72,837=1,72,837
- (d) 6,93,54,725-6,93,54,725=0
- (e) 5,29,84,346-40,00,0000 = 1,29,84,346
- (f) 9,37,50,375-50,376=9,36,99,999
- (g) 8,27,64,399-10,00,000=8,17,64,399
- (h) 54,82,896-10,00,000=44,82,896

Exercise 3.3

### 1. Tick $(\checkmark)$ the correct answer :

- (a) (iii) 3,82,285 ✓  $(3785 \times (100 + 1) = 378500 + 3785 = 3,82,285)$
- (b) (iii) 4,32,756 ✓

2.	Mu	ltiply the foll	owir	ng:				
	(a)	5,623	(b)	18,3	73	(c)		5,744
	()	× 4	(-)		6	(-)		× 7
		22,492		1,10,2			4	0,208
	(d)	7,586	(e)	15	,749	(f)	2	2,64,351
	()	× 13	(-)		< 26	(-)		× 5
		22,758			,494		13	3,21,755
		+75,860		+ 3,14				.,21,755
		98,618			,474			
3.	Fin	d the product	•		, , , , , ,			
	(a)	5,38,746	(b)	30	46,762	2	(c)	86,13,142
	(a)	× 23	(0)	50,	× 32		(C)	× 94
	-	16,16,238		60	93,524		_	3,44,52,568
		1,07,74,920		+ 9,14,				77,51,82,780
	- -	1,23,91,158			96,384			80,96,35,348
	-	1,23,91,130		9,74,	90,38	+	-	80,90,33,348
	(d)	37,965	(e)		8,796		(f)	2,84,009
		× 205			< 124	_		× 208
		1,89,825			5,184			22,72,072
		+0,00,000		29,7	5,920			00,00,000
		75,93,000	+	- 1,48,7		_	+	- 5,68,01,800
		77,82,825		1,84,5	0,704			5,90,73,872
4.	Mu	ltiply the foll	owir	ng:				
	(a)	67,581		(b)	27,84	43	(c)	1,32,117
	. ,	× 326		. ,	× 98			× 612
	-	4,05,486		1	1,94,90			2,64,234
		13,51,620			2,27,44			13,21,170
	+	2,02,74,300			),58,7(		-	+ 7,92,70,200
	-	2,20,31,406			4,81,04			8,08,55,604
	(d)	27,92,834		(e)	54,896		(f)	2,73,821
	(u)	× 237		· ·	1,856		(f)	$\times 2,005$
		1,95,49,838	-		29,376			13,69,105
		8,37,85,020			44,800			00,00,000
	+	55,85,66,800			16,800			0,00,00,000
		<u>66,19,01,658</u>	-	+ 5,48,9			<u>т</u>	54,76,42,000
		00,17,01,050	-	10,18,			-	54,90,11,105
_	<b>a</b> 1					_	-	
5.		ve the followi	-	_				147
	(a)	The cost f 1 b				147		× 50
		The cost of 5	0 bot	ttles of o				) <u> </u>
					=`	7,350	)	+ 7,350
		So, the shopk	ceepe	er made	e` 7,35	0		7,350
	(b)	The number	ofm	inutes i	n 1 hoi	1r =	= 60	60
	(0)	The number of					24	× 24
		The number			-			240
		The number of	51 111	mutesn	II 27 II(		: 1,4	10 1200
		The nu	mhe	r of sec	ondsii			1,110
								$=1,440 \times 60$
					140			=86,400
					60			00,100
					000			
				+ 86,4				
				+ 80,4				
		So the numb	orol			donia	0 <i>6 1</i>	00
		So, the numb	er 01	second	18 111 1 (	Jay 18	00,4	-00

(c) The number of students = 1,597The fee each student pays in 1 quarter = ` 7,659 The fee each students pays in 1 year or 4 quarters = ` (7,659 × 4) =`30,636 The fee 1,597 students pay in 1 year =`(30636 × 1,597) 30,636 =`4,89,25,692 × 1,597 2,14,452 27,57,240 1,53,18,000 + 30636,000 4,89,25,692

So, 4,89,25,692 are collected in a year.

Exercise 3.4

### Fill in the blanks :

- 1.  $5,000 \times 100 = 5,00,000$
- 2.  $3,842 \times 30 = 3,842 \times 3 \times 10 = 11,526 \times 10 = 1,15,260$
- 3.  $8,96,567 \times 0 = 0$
- 4. 3,000 × 1,000 = **30,00,000**
- 5.  $1,500 \times 400 = 1,500 \times 4 \times 100 = 6,000 \times 100 = 6,00,000$
- 6.  $83,670 \times 200 = 83,670 \times 2 \times 100 = 1,67,340 \times 100$ 
  - =1,67,34,000
- 7.  $240 \times 40 = 240 \times 4 \times 10 = 960 \times 10 = 9,600$
- 8. 40,000 × **80** = 32,00,000
- 9. 80×**500**=40,000
- 10. 900 × **8,000** = 72,00,000

Exercise 3.5

1. Find the quotient and remainder and check your answers : [Hint : Use for checking : (Divisor × Quotient) + Remainder = Dividend]

(a)	$15,435 \div 1154$	1154) 15435(13
		- 1154
		3895
		-3462
		433

	Quotient = 13, Remainder = 433	1154
	Checking: $(13 \times 1,154) + 433 = 15,4$	$_{35}$ × 13
	$\frac{(13 \times 1,134)}{15,002+433} = 15,435$	3462
	So, the answer is correct. $13,002 + 433 = 13,433$	+ 11540
( <b>b</b> )	·	15002
(0)	50,976÷75	10002
	75)50976(679	
	-450	
	597	
	- 726	
	726	
	- 675	
	51	

11 - 4



	Quotient = 679, Remainder = 51       679         Checking : $(75 \times 679) + 51 = 50,976$ $\times$ 75 $50,925 + 51 = 50,976$ 3395         So, the answer is correct. $+$ 47530 $50925$ $50925$
(c)	53,82,695÷87
	$87)\overline{5382695}61870$ $-522$ $-87$ $-87$ $-756$ $-696$ $-609$ $-609$ $-609$ Quotient = 61,870, Remainder = 5
	Checking: $(87 \times 61,870) + 5 = 53,82,695$ 61870 53,82,690 + 5 = 53,82,695 $\times$ 87
(d)	So, the answer is correct. $\frac{433090}{433090}$
	$ \begin{array}{r} -\frac{672}{918} \\ -\underline{864} \\ 540 \\ -\underline{480} \\ 600 \\ -\underline{576} \\ \underline{24} \\ \end{array} $
	Quotient = 7,956, Remainder = 247956Checking: $(96 \times 7,956) + 24 = 7,63,800$ $\times 96$ 7,63,676 + 24 = 7,63,80047736
(e)	So, the answer is correct. $+715940$ 82,03,015 $\div$ 695 $-763676$
(e)	$ \begin{array}{r} 82,03,015 \div 695 & 763676 \\ \hline 695) 8203015(11802 \\ - \underline{695} \\ 1253 \\ - \underline{695} \\ 5580 \\ - \underline{5560} \\ 2015 \\ \underline{-1390} \\ 625 \\ \end{array} $
	Quotient = 11,802, Remainder = 625 11802 Checking: $(695 \times 11,802) + 625 = 82,03,015 \times 695$ 8202390 + 625 = 82,03,015 59010 1062180 + 7081200 8202390

(f)	69,27,813÷259
	259)6927813(26748
	$-\frac{518}{1747}$
	- 1554
	1938
	$-\frac{1813}{1251}$
	1251 <u>1036_</u>
	2153
	$\frac{2072}{21}$
	Quotient = $26,748$ , Remainder = $81$ 26748 Checking: $(259 \times 26,748) + 81 = 69,27,813 \times 259$
	Checking: $(259 \times 26,748) + 81 = 69,27,813 \times 259$ $69,27,732 + 81 = 69,27,813 \times 240732$
	So, the answer is correct. $1337400 + 5349600$
	6927732
(g)	3,21,796÷623
	623) <u>321796(</u> 516 - 3115
	<u> </u>
	$\frac{-623}{4066}$
	4066 - 3738
	$\frac{-3738}{328}$ 623
	Quotient = 516, Remainder = 328 $\times \frac{516}{2729}$
	Checking: $(623 \times 516) + 328 = 3,21,796$ 3738 6230
	3,21,468+328=3,21,796 + 311500
(1.)	So, the answer is correct. $321468$
(n)	20,17,608÷567
	567)2017608(3558 - 1701
	3166
	$\frac{-2835}{2210}$
	3310 - 2835
	4758
	$-\frac{4536}{222}$
	Quotient = $3,558$ Remainder = $222$ Checking: $(567 \times 3,558) + 222 = 20,17,608$
	$\begin{array}{c} (307 \times 3,338) + 222 - 20,17,008\\ 20,17,386 + 222 = 20,17,608 \end{array}$
	So, the answer is correct.
	3558
	$\frac{\times 567}{24906}$
	213480
	$+\frac{1779000}{2017386}$

Quotient = 30,544; Remainder = 30					
Checking:	$(249 \times 30,544) + 30 = 76,05,$	486			
	76,05,456+30=76,05,486	30544			
So, the answ	er is correct.	× 249			
		274896			
		1221760			
	+	6108800			
		7605456			

### 2. Find the dividend when :

r ma the arviaena when:	
[Hint: Dividend = (Divisor × Quotien	nt) + Remainder ]
(a) Dividend = $(273 \times 20,632) + 100$	0 20632
=56,32,536+100	× 273
=56,32,636	61896
	1444240
	+4126400
	5632536
(b) Dividend = $(763 \times 9,857) + 93$	9857
=75,20,891+93	× 763
=75,20,984	29571
-75,20,904	591420
	+ 6899900
	7520891
(c) Dividend = $(187 \times 3,077) + 6$	3077
=5,75,399+6	× 187
=5,75,405	21539
	246160
-	+307700
	575399

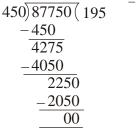
### 3. Solve the following problems :

(a) The company needs to make in 211 days = 53,594 shirts The company needs to make in 1 day =  $(53,594 \div 211)$ shirts = 254 shirts

21	1)53594(254
	-422
	1139
	-1055
	844
Therefore, the company needs to	- 844
make 254 shirts per day.	00

(b) The cost of the school trip for 450 students = 87,750

The cost of the school trip for 1 student  $= (87,750 \div 450)$  = 195



Therefore, each student paid `195 for the trip.

(c) We have, Quotient = Dividend  $\div$  Divisor

According to question, Dividend = 78,97,890 Divisor = 789

and Quotient is the desired number = 10,010

Therefore, 789 must be multiplied with 10,010 to give 78,97,890

(d) Total cost of 50 air tickets to Chennai=1,78,000The cost of 1 air ticket to Chennai = $(1,78,000 \div 50)$ 

50)178000(3560
-150
280
-250
300
-300
00

Therefore, the cost of one ticket to Chennai is ` 3,560.

Exercise 3.6

### 1. Find the quotient and remainder :

- (a)  $56,748 \div 10$ 
  - Quotient = 5,674; Remainder = 8
- (b) 9,32,465 ÷ 100 Quotient = 9,324; Remainder = 65
- (c) 19,73,107 ÷ 10,000 Quotient = 197; remainder = 3107
- (d)  $8,28,96275 \div 1,00,000$ Quotient = 828, Remainder = 96,275
- (e) 394 ÷ 10 Quotient = 39, Remainder = 4
- (f)  $5,367 \div 100$

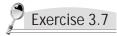
Quotient = 53, Remainder = 67



- (g)  $8,59,76,431 \div 10,00,000$ Quotient = 85, Remainder = 9,76,431
- (h) 2,50,036÷1000 Quotient = 250, Remainder = 36

### 2. Fill in the blanks :

- (a)  $56,71,000 \div 100 = 56710$
- (b)  $31,93,74,500 \div 100 = 3193745$
- (c)  $15,10,000 \div 1 = 1510000$
- (d)  $2,39,675 \div 0 = 0$
- (e)  $1,81,30,000 \div 1000 = 18130$
- (f)  $82,671 \div 82,671 = 1$
- (g)  $7,89,30,000 \div 10,000 = 7893$
- (h)  $2,00,000 \div 100000 = 2$



Round off to of the nearest ten thousands and estimate : 1. (a) 78,562-52,462

```
78,562 \rightarrow (rounded off to) \rightarrow 80,000
          52,462 \rightarrow (rounded off to) \rightarrow 50,000
          Estimated difference = 80,000 - 50,000 = 30,000
     (b) 39,486-32,186
          39,486 \rightarrow (rounded off to) \rightarrow 40,000
          32.186 \rightarrow (rounded off to) \rightarrow 30.000
          Estimated difference = 40,000 - 30,000 = 10,000
     (c) 13,942 - 11,787
          13.942 \rightarrow \text{(rounded off to)} \rightarrow 10.000
          11,787 \rightarrow (rounded off to) \rightarrow 10,000
          Estimated difference = 10,000 - 10,000 = 0
2. Estimate the product by rounding of to the nearest 1,000 :
     (a) 8691×1234
          8691
                     \rightarrow (rounded off to) \rightarrow 9000
          1234
                    \rightarrow (rounded off to) \rightarrow 1000
          Estimated product = 9000 \times 1000 = 90,00,000
     (b) 6120×3891
          6120
                    \rightarrow (rounded off to) \rightarrow 6000
          3891
                     \rightarrow (rounded off to) \rightarrow 4000
          Estimated product = 6000 \times 4000 = 2,40,00,000
     (c) 3971×4326
          3971
                    \rightarrow (rounded off to) \rightarrow 4000
          4326
                    \rightarrow (rounded off to) \rightarrow 4000
          Estimated product = 4000 \times 4000 = 1,60,00,0000
3. Estimate the quotient by rounding off to the nearest
     thousand:
     (a) 5825 \div 2125
          5825
                    \rightarrow (rounded off to) \rightarrow 6000
          2125
                    \rightarrow (rounded off to) \rightarrow 2000
          Estimated product = 6000 \div 2000 = 3
     (b) 4236÷1983
          4236
                    \rightarrow (rounded off to) \rightarrow 4000
          1983
                        (rounded off to)
                                              \rightarrow 2000
                    \rightarrow
```

Estimated product =  $4000 \div 2000 = 2$ (c)  $8125 \div 3965$ 8125  $\rightarrow$  (rounded off to)  $\rightarrow$  8000 3965  $\rightarrow$  (rounded off to)  $\rightarrow$  4000 Estimated product =  $8000 \div 4000 = 2$ 4. Estimate the quotient by rounding off to the nearest lakh : (a)  $56,75,321 \div 4,95,861$ 56,75,321  $\rightarrow$  (rounded off to)  $\rightarrow$  57,00,000 4.95.861  $\rightarrow$  (rounded off to)  $\rightarrow$  5,00,000 Estimated quotient =  $57,00,000 \div 5,00,000 = 11.4$ (b) 26,43,841÷13,10,211 26,43,841  $\rightarrow$  (rounded off to)  $\rightarrow$  26,00,000 13.10.211  $\rightarrow$  (rounded off to)  $\rightarrow$  13,00,000 Estimated quotient =  $26,00,000 \div 13,00,000 = 2$ Tick ( $\checkmark$ ) the correct answer : (a) Weight of sugar in 1 bag 96 kg  $\rightarrow$  (rounded off to)  $\rightarrow$  100 kg The number of bags,  $48 \rightarrow$  (rounded off to)  $\rightarrow 50$ So, the estimated weight of bags =  $(100 \times 50)$  kg  $= 5000 \, \text{kg}$ *Answer*: (i) 5000 kg ✓ (b) The number of cricket balls,  $342 \rightarrow$  (rounded off to)  $\rightarrow 300$ The cost of 1 ball,  $291 \rightarrow$  (rounded off to)  $\rightarrow 300$ So, the estimate amount, Sweta has to pay = (300 × 300) = 90,000 *Answer* : (i) ` 90,000 ✓ Solve the following problems and find the actual and estimated answers : 86,25,965 tons (a) For actual answer : + 74,25,691 tons Wheat produced by state 1 =1,60,51,656 tons Wheat produced by state 2 =The total production = For estimate answer : Wheat produced by state -1 $= 86,25,965 \text{ tons} \rightarrow (\text{rounded off to}) \rightarrow 90,00,000 \text{ tons}$ Wheat produced by state -2= 74,25,691 tons  $\rightarrow$  (rounded off to)  $\rightarrow$  70,00,000 tons Total estimated production =(90,00,000+70,000,000) tons = 1,60,00,000 tons So, the actual quantity of wheat produced =1,60,51,656 tons and, the estimated quantity of wheat produced =1,60,00,000 tons (b) For actual answer : The number of girls studying in primary school = The number of girls studying in middle schools =

The total number of girls = +3,76,998

5.

6.



### For estimated answer :

The number of girls studying in primary schools  $=3,22,596 \rightarrow$  (rounded off to)  $\rightarrow 3,00,000$ The number of girls studying in middle schools  $=3,76,988 \rightarrow$  (rounded off to)  $\rightarrow 4,00,000$ The estimated number of girls = 3,00,000 + 4,00,000=7,00,000So, the actual number of girls studying in primary and middle schools together = 6,99,594and, the estimated number of girls studying in primary and middle schools together = 7,00,000(c) For actual answer: 1,28,792 kg The quantity of tomatoes =2,86,742 kg The quantity of potatoes =+ 5,23,241 kg The quantity of onions =9,38,775 kg Total quantity =For estimated answer : The quantity of tomatoes = 1,28,792 kg  $\rightarrow$  (rounded off to)  $\rightarrow$  1,00,000 kg The quantity of potatoes  $=2,86,742 \text{ kg} \rightarrow (\text{rounded off to}) \rightarrow 3,00,000 \text{ kg}$ The quantity of onions  $=5,23,241 \text{ kg} \rightarrow (\text{rounded off to}) \rightarrow 5,00,000 \text{ kg}$ The estimated quantity = (1,00,000 + 3,00,000)+5,00,000) kg =9.00,000 kg So, the actual quantity of these three vegetables =9,38,775 kg and the estimated quantity of these three vegetables  $= 9,00,000 \, \text{kg}$ Exercise 3.8 1. Simplify: (b)  $5896 \times 40208 \div 359$ (a)  $3320 \div 83 \times 40$ 5896×112=6,60,352  $=40 \times 40 = 1600$ (c)  $979 \times 7,73,090 \div 970$ (d)  $(35+47) \times 75$ 979×797=7,80,263  $82 \times 75 = 6150$ (e)  $4928 \div (80 - 48)$ (f)  $(72 \times 168) \div 21 \text{ of } 16$  $=\!4928\div\!32$  $= 12,096 \div 21 \text{ of } 16$ =154  $= 12,096 \div 336 = 36$ (g)  $4658 \times 137 - 57456 \div 48 \times 178$  $=6,38,146-1197 \times 178$ =6,38,148-2,13,066=4,25,080(h)  $9000 \div 30 \text{ of } 30 + 750 \div 250$  $=9000 \div 900 + 3$ =10+3 =132. Write T for true and F for false statements : (a)  $(13 \times 8) - 6 = 13 \times (8 - 6)$ L.H.S. (Left Hand Side) =  $(13 \times 8) - 6 = 104 - 6 = 98$ R.H.S. (Right Hand Side) =  $13 \times (8-6) = 13 \times 2 = 26$ L.H.S. is not equal to R.H.S. Answer: 'F'

- (b)  $96 \div (8 \times 12) = (96 \div 8) \times 12$ L.H.S. =  $96 \div (8 \times 12) = 96 \div 96 = 1$ R.H.S. =  $(96 \div 8) \times 12 = 12 \times 12 = 144$ L.H.S. is not equal to R.H.S. *Answer*: 'F'
- (c)  $86 \times 39 \div 13 = 86 \times (39 \div 13)$ L.H.S. =  $86 \times 39 \div 13 = 86 \times 3 = 258$ R.H.S. =  $86 \times (39 \div 13) = 86 \times 3 = 258$ L.H.S. = R.H.S. *Answer*: 'T'
- (d)  $(125 \times 32) \div 8 = 125 \text{ of } (32 \div 8)$ L.H.S. =  $(125 \times 32) \div 8 = 4000 \div 8 = 500$ R.H.S. =  $125 \text{ of } (32 \div 8) = 125 \text{ of } 4 = 500$ L.H.S. = to R.H.S. *Answer*: 'T'

Revision

1. Solve:

(a)	9928041	(b)	24007856
	+29864752		- 3982751
	39792793		2,00,25,105

(c) 8329457 + 3596457 - 1129854

8329457	11925914
+3596457	- 1129854
11925914	10796060

= 11925914 - 1129854 = 1,07,96,060 Answers : 1,07,96,060

(d)	3251649-156794-11329	156794	3251649
	= 3251649 - (156794 + 11329)	+ 11329	- 168123
	=3251649-168123	168213	3083526
	= 30,83,526		

	(e)	100284	(f) 698)74892	2608(107296
		× 408	- 698	,
		802272	5092	2
		0000000	- 4886	
		+40113600	200	
		40915872	- 139	
			67	700
			_ 62	282
				4188
			_ 2	4188
				00
			Quotient = 107296	
			Remainder = 0	
2.	(a)	156794	2. (b)	328228
	. ,	+ 11329		× 473
		168123		984684
				22975960
				+ 131291200
				15,52,51,844



### 3. Find the missing numbers :

(a) Dividend = 1584312, Quotient = 263, Remainder = 0 Divisor = ? We have, Divisor = (Dividend – Remainder) ÷ Quotient So, Divisor = (1584312 – 0) ÷ 263 = 1584312 ÷ 263 = 6024

$$263)\overline{1584312}(6024) - \underline{1578}(631) - \underline{526}(631) - \underline{526}(700) - \underline{52$$

4. The required number = 10000000 - 4893615= 5106385 10000000 + 48936155106385

Therefore, 5106385 should be added to 4893615 to get 10000000.

5. Largest 7-digit number = 9999999 Largest 3-digit number = 999

 $\begin{array}{r}
999) \overline{999999999}(10010 \\ -\underline{999} \\ \hline 0999 \\ \underline{-999} \\ \underline{-999} \\ 09 \\ \hline 09 \\ \hline 09 \\ \end{array}$ 

Quotient = 10010; remainder = 9

6. The money spent on roads = 
$$24284365$$
  
The money spent on health =  $+$   $18769590$   
The total money spent on both =  $43053955$   
The granted money =  $5000000$   
The money spent on roads and health =  $43053955$   
The balance money =  $6946045$   
So,  $69,46,045$  was used to build the hospital.  
7. The cost of the car =  $265000$ 

Nitish paid = 
$$-$$
 261220

The remainder amount = 3780

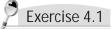
So, the total amount of 6 equal  $\overline{\text{installments}} = 3780$ 

The amount of 1 installment =  $(3780 \div 6) = 630$ 



Therefore the amount of each installment is ` 630. 8. (a) The capacity of 1 tank = 500 litres of water The capacity of 30 tanks =  $(30 \times 500)$  litres of water = 15,000 litres of waters. So, 15,000 litres of water will be filled in such 30 tanks (b) The number of buckets that can be filled with 1 tanks of water = 25The number of buckets that can be filled with 30 tanks of water  $= 25 \times 30$ =750So, 750 buckets can be filled with 30 tanks of water. 9. Simplify the following : (a)  $97 \times 26 \div 13 + 27 \times 7$ (b)  $290 + 5 \times (700 \div 70)$  $= 97 \times 2 + 27 \times 7$  $=290+5 \times 10$ = 194 + 189 = 383= 290 + 50 = 340(c)  $(72 \times 168) \div 21 \text{ of } 16$ (d)  $(487 - 336) \times 65$ 

 $= 12096 \div 21 \text{ of } 16 = 151 \times 65$ = 12096 ÷ 336 = 36 = 9815 (e) {17 × (168 - 128)} - 463 (f) {17 × (112 - 78)} \div 289 = {17 × 40} - 463 = {17 × 34} \div 289 = 680 - 463 = 217 = 578 \div 289 = 2



1. Check divisibility by 2, 3, 5, 9 and 10. Put a tick (✓) for divisible and a cross (✗) for not divisible :

		Divisible by				
	Number	2	3	5	9	10
(a)	420	1	1	1	X	1
(b)	7353	X	1	X	1	X
(c)	8970	1	1	1	X	1
(d)	45885	X	1	1	X	X
(e)	98460	✓	1	1	<ul> <li>✓</li> </ul>	1

2. Which of the following numbers are divisible by both 3 and 9.

(a) 855

Δ

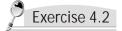
The total of the digits is (8 + 5 + 5 = 18), which is divisible by both 3  $(18 \div 3 = 6)$  and 9  $(18 \div 9 = 2)$ . So, the number 855 is divisible by both 3 and 9.

(b) 5622

The total of the digits is (5 + 6 + 2 + 2 = 15), which is divisible by 3  $(15 \div 3 = 5)$  but not by 9. So, the number 5622 is not divisible by both 3 and 9. (c) 876

The total of the digits is (8 + 7 + 6 = 21), which is divisible by 3  $(21 \div 3 = 7)$  but not by 9. So, the number 876 is not divisible by both 3 and 9.

- (d) 8001: The total of the digits is (8+0+0+1=9), which is divisible by both  $3(9\div3=3)$  and  $9(9\div9=1)$ . So, the number 8001 is divisible by both 3 and 9.
- 3. We have "a number is divisible by 2 if the digit at its ones place is 0, 2, 4, 6 or 8", so 2554 and 836 both are divisible by 2, because they have 4 and 6 at their ones place, respectively. The sum of the numbers (2554 + 836 = 3390) has 0 at its ones place, so it is also divisible by 2. The difference of the numbers (2554 836 = 1718) has 8 at its ones place, so it is also divisible by 2.



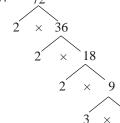
### 1. List all prime and composite numbers which are :

- (a) Less than 20
  Prime numbers: 2, 3, 5, 7, 11, 13, 17, 19.
  Composite numbers: 4, 6, 8, 9, 10, 12, 14, 15, 16, 18.
- (b) Between 30 and 40Prime numbers: 31, 37Composite numbers: 32, 33, 34, 35, 36, 38, 39.
- (c) Between 40 and 54
  Prime numbers: 41, 43, 47, 53.
  Composite numbers: 42, 44, 45, 46, 48, 49, 50, 51, 52.
- (d) More than 78, less than 90
  Prime numbers: 79, 83, 89.
  Composite numbers: 80, 81, 82, 84, 85, 86, 87, 88
- 2. Express prime numbers as the sum of three prime numbers :

(a) $23 = 11 + 7 + 5$	(b) $31 = 19 + 7 + 5$
(c) $59 = 47 + 7 + 5$	(d) $67 = 47 + 13 + 7$

- 3. Pick out the composite numbers and find their prime factors using factor tree method :
  - (a) 13 is a prime number.





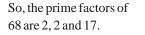
So, the prime factors of 72 are 2, 2, 2, 3 and 3.

(c) 53 is a prime number.

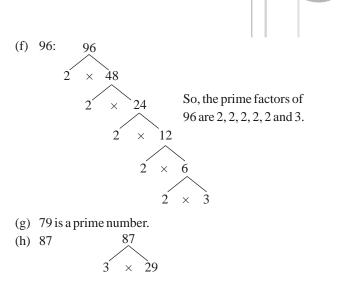








So, the prime factors of 84 are 2,2,3 and 7



So, the prime factors of 87 are 3 and 29.

- **4.** The two pairs of prime numbers which have a difference of 2 are 11 and 13, and 29 and 31. These numbers are called twin primes.
- 5. Write prime factorisation of the following numbers using division method :
  - (a) Prime factorization of  $60 = 2 \times 2 \times 3 \times 5$   $2 \quad 60$   $2 \quad 30$   $3 \quad 15$   $5 \quad 5$  1
- (b) Prime factorization of  $77 = 7 \times 11$

7	77
11	11
	1

(d) Prime factorization of

(c) Prime factorization of  $105=3\times5\times7$ 

1	28=2>	<2×2×2×2×2×2×2
	2	128

3	105
5	35
7	7
	1

2	128
2	64
2	32
2	16
2	8
2	4
2	2
	1

(e) Prime factorization of  $216 = 2 \times 2 \times 3 \times 3 \times 3$ 

(f) Prime factorization of  $356 = 2 \times 2 \times 89$ 

		2	216				2	356	
		2							
		2	108				2	178	
		2	54				89	89	)
		3	27					1	_
		3	9	(h)	Prin	ne facto	rizati	onof	
		3	3		325	$=5\times5\times$	13	5	325
			1					5	65
(g)	Prim	ne	factoriz	ation of	2	250		13	13
	250	=2	$2 \times 5 \times 5 \times 5$	5	5	125			1
					5	25			
					5	5			
						1			





- 1. Find the HCF of the following numbers, using factor method : (a) 8,10 Factors of 8 = 1, 2, 4, 8Factors of 10=1, 2, 5, 10 Common factors of 8 and 10 = 1 and 2 Thus, the HCF of 8 and 10 = 2(b) 6.14 Factors of 6 = 1, 2, 3, 6Factors of 14 = 1, 2, 7, 14Common factors of 6 and 16 = 1 and 2 Thus, the HCF of 6 and 16 = 2(c) 20,72 Factors of 20 = 1, 2, 4, 5, 10, 20 Factors of 72 = 1, 2, 3, 4, 6, 8, 9, 12, 18, 24, 36, 72 Common factors of 20 and 72 = 1, 2 and 4 Thus, the HCF of 20 and 72 = 4(d) 36,90 Factors of 36 = 1, 2, 3, 4, 6, 9, 12, 18, 36 Factors of 90 = 1, 2, 3, 5, 6, 9, 10, 15, 18, 30, 45, 90 Common factors of 36 and 90 = 1, 2, 3, 6, 9 and 18 Thus, the HCF of 36 and 90 = 18(e) 7, 21 Factor of 7 = 1, 7Factor of 21 = 1, 3, 7, 21Common factors of 7 and 21 = 1 and 7 Thus, the HCF of 7 and 21 = 7(f) 100,150 Factors of 100 = 1, 2, 4, 5, 10, 20, 25, 50, 100 Factors of 150 = 1, 2, 3, 5, 6, 10, 15, 25, 30, 50, 75, 150 Common factors of 100 and 150 = 1, 2, 5, 10, 25 and 50 Thus, the HCF of 100 and 150 = 50(g) 90.108 Factors of 90 = 1, 2, 3, 5, 6, 9, 10, 15, 18, 30, 45, 90 Factors of 108 = 1, 2, 3, 4, 6, 9, 12, 18, 27, 36, 54, 108 Common factors of 90 and 108 = 1, 2, 3, 6, 9, 18 Thus, the HCF of 90 and 108 = 18(h) 48,72 Factors of 48 = 1, 2, 3, 4, 6, 8, 12, 16, 24, 48 Factors of 72 = 1, 2, 3, 4, 6, 8, 9, 12, 18, 24, 36, 72 Common factors of 48 and 72 = 1, 2, 3, 4, 6, 8, 12 and 24 Thus, the HCF of 48 and 72 = 24(i) 12,18,30 Factors of 12 = 1,2,3,4,6,12 Factors of 18 = 1,2,3,6,9,18 Factors of 30 = 1, 2, 3, 5, 6, 10, 15, 30Common factors of 12, 18 and 30 = 1, 2, 3 and 6 Thus, the HCF of 12, 18 and 30 = 6
- (j) 10,15,25 Factors of 10 = 1, 2, 5, 10Factors of 15 = 1, 3, 5, 15Factors of 25 = 1,5,25Common factors of 10, 15 and 25 = 1 and 5 Thus, the HCF of 10, 15 and 25 = 5(k) 8,12,16 Factors of 8 = 1, 2, 4, 8Factors of 12 = 1,2,3,4,6,12 Factors of 16 = 1, 2, 4, 8, 16Common factors of 8, 12 and 16 = 1, 2 and 4 Thus, the HCF of 8, 12 and 16=4(1) 16,72,80: Factors of 16 = 1,2,4,8,16 Factors of 72 = 1,2,3,4,6,8,9,12,18,24,36,72 Factors of 80 = 1, 2, 4, 5, 8, 10, 16, 20, 40, 80Common factors of 16, 72 and 80 = 1, 2, 4 and 8 Thus, the HCF of 16, 72 and 80 = 8
- 2. Do yourself

# **3.** Find the HCF of the following numbers, using prime factorization method:

(a) 28,84 The prime factors of  $28 = 2 \times 2 \times 7$ The prime factors of  $84 = 2 \times 2 \times 3 \times 7$ 

Common prime factor of 28 and  $84 = 2 \times 2 \times 7$ 

2	28		2	84
2	14	_	2	42
7	7	_	3	21
	1	_	7	7
		_		1

Thus, the HCF of 28 and 84 is  $(2 \times 2 \times 7=)$  28.

(b) 32,64

Working

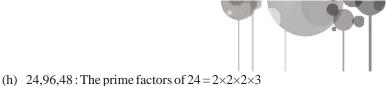
Working:

2	32	2	64
2	16	2	32
2	8	2	16
2	4	2	8
2	2	2	4
	1	2	2
			1

Thus the HCF of 32 and 64 is  $(2 \times 2 \times 2 \times 2 \times 2 =)$  32.

(c) 90,105

The prime factors of  $90 = 2 \times 3 \times 3 \times 5$ The prime factors of  $105 = 3 \times 5 \times 7$ Common prime factors of 90 and  $105 = 3 \times 5$ 



Working

2	90		3	105
3	45		5	35
3	15	,	7	7
5	5			1
	1			

Thus, the HCF of 90 and 105 is  $(3 \times 5=)$  15.

### (d) 75,180

The prime factors of  $75 = 3 \times 5 \times 5$ The prime factors of  $180 = 2 \times 2 \times 3 \times 3 \times 5$ Common prime factors of 75 and  $180 = 3 \times 5$ *Working* 

3	75	2	180
5	25	 2	90
5	5	3	45
	1	3	15
		5	5
			1

Thus, the HCF of 75 and 180 is  $(3 \times 5=)$  15.

(e) 56,98

Working

The prime factors of  $56 = 2 \times 2 \times 2 \times 7$ 

The prime factors of  $98 = 2 \times 7 \times 7$ 

Common prime factors of 56 and  $98 = 2 \times 7$ 

2	56	2	98
2	28	7	49
2	14	7	7
7	7		1
	1		

Thus, the HCF of 56 and 98 is  $(2 \times 7=)$  14.

(f) 60,75

The prime factors of  $60 = 2 \times 2 \times 3 \times 5$ 

The prime factors of  $75 = 3 \times 5 \times 5$ 

Common prime factors of 60 and  $75 = 3 \times 5$ 

Working

2	60	3	75
2	30	 5	25
3	15	 5	5
5	5		1
	1		

Thus, the HCF of 60 and 75 is  $(3 \times 5=)$  15.

(g) 90, 180 : The prime factors of  $90 = 2 \times 3 \times 3 \times 5$ The prime factors of  $180 = 2 \times 2 \times 3 \times 3 \times 5$ Common prime factors of 90 and  $180 = 2 \times 3 \times 3 \times 5$ *Working* 

	2	90	2	180
	3	45	2	90
	3	15	3	45
	5	5	3	15
)		1	5	5
				1

Thus, the HCF of 90 and 180 is  $(2 \times 3 \times 3 \times 5 =)$  90.

working						
	2	24	2	96	2	48
	2	12	2	48	2	24
	2	6	2	24	2	12
	3	3	2	12	2	6
		1	2	6	3	3
			3	3		1

Common prime factors of 24, 96 and  $48 = 2 \times 2 \times 2 \times 3$ 

The prime factors of  $96 = 2 \times 2 \times 2 \times 2 \times 3$ The prime factors of  $48 = 2 \times 2 \times 2 \times 3$ 

Working

Thus, the HCF of 24, 96 and 48 is  $(2 \times 2 \times 2 \times 3 =)$  24.

(i) 32,128,64: The prime factors of  $32 = 2 \times 2 \times 2 \times 2 \times 2$ The prime factors of  $128 = 2 \times 2 \times 2 \times 2 \times 2 \times 2$ The prime factors of  $64 = 2 \times 2 \times 2 \times 2 \times 2 \times 2$ Common prime factors of 32, 128 and  $64 = 2 \times 2 \times 2 \times 2 \times 2 \times 2$ 

Working

2	32	2	128	2	64
2	16	2	64	2	64 32
2	8	2	32	2	16
2	4	2	16	2	8
2	2	2	8	2	4
	1	2	4	2	2
		2	2		1
			1		
			_		

1

Thus, the HCF of 32, 128 and 64 is  $(2 \times 2 \times 2 \times 2 \times 2 =)$  32.

(j) 72,108,112 : The prime factors of  $72 = 2 \times 2 \times 2 \times 3 \times 3$ The prime factors of  $108 = 2 \times 2 \times 3 \times 3 \times 3$ The prime factors of  $112 = 2 \times 2 \times 2 \times 2 \times 7$ Common prime factors of 72,108 and  $112 = 2 \times 2$ 

Working

2	72	2	108	2	112
2	36	2	54	2	56
2	18	3	27	2	28
3	9	3	9	2	14
3	3	3	3	7	7
	1		1		1

Thus, the HCF of 72, 108, and 112 is  $(2 \times 2=)4$ .

(k) 91,49,112: The prime factors of  $91 = 7 \times 13$ The prime factors of  $49 = 7 \times 7$ The prime factors of  $112 = 2 \times 2 \times 2 \times 2 \times 7$ Common prime factors of 91,49 and 112 = 7*Working* 

7	91	7	49	2	112
13	13	7	7	2	56
	1		1	2	28
				2	14
				7	7
					1

Thus, the HCF of 91, 49 and 112 is 7.



(1) 240, 60, 180 : The prime factors of  $240 = 2 \times 2 \times 2 \times 2 \times 3 \times 5$ The prime factors of  $60 = 2 \times 2 \times 3 \times 5$ The prime factors of  $180 = 2 \times 2 \times 3 \times 3 \times 5$ Common prime factors of 240, 60 and  $180 = 2 \times 2 \times 3 \times 5$ *Working* 

2	240	2	60	2	180
2	120	2	30	2	90
2	60	3	15	3	45
2	30	5	5	3	15
3	15		1	5	5
5	5				1
	1				

Thus, the HCF of 240,60 and 180 is  $(2 \times 2 \times 3 \times 5 =)$  60.

- 4. Find the HCF of the following numbers, using long division method :
  - (a) 75, 100: Here the first divisor is 75.

$$75\overline{)100(1)} - \frac{75}{25}\overline{)75(3)}$$
 Here the last divisor is 25.  
$$-\frac{75}{0}$$

Thus, the HCF of 75 and 100 is 25.

(b) 55, 88: Here the first divisor is 55.

$$55\overline{)88(1)} - 55\overline{33}55(1) - 33\overline{22}33(1) - 22\overline{11}22(2)$$
 Here the last divisor is 11.  
$$-\frac{22}{0}$$

Thus, the HCF of 55 and 88 is 11.

(c) 15, 18: Here the first divisor is 15.

$$15\overline{)18(1)} - \frac{15}{3}15(5)$$
Here the last divisor is 3.  

$$-\frac{15}{0}$$

- Thus, the HCF of 15 and 18 is 3.
- (d) 27, 81; Here the first divisor is 27

$$\begin{array}{c} 27\overline{)81(3)} \\ -\underline{81} \\ \underline{0} \end{array}$$
 Here the last divisor is also 27.

Thus, the HCF of 27 and 81 is 27.

(e) 121, 132: Here the first divisor is 121.

$$\begin{array}{r}
121\overline{)132(1)} \\
-121 \\
11)121(1) \\
-11 \\
11)11(1) \\
-11 \\
-11 \\
0
\end{array}$$
Here the last divisor is 11

Thus, the HCF of 121 and 132 is 11. (f) 140, 350: Here the first divisor is 140.

$$140\overline{)350(2)} -280$$

$$70\overline{)140(2)}$$

$$-140$$

$$\underline{0}$$
Here the last divisor is 70

$$364\overline{)576(1)} -364$$

$$-364$$

$$2\overline{12})364(1)$$

$$-212$$

$$152212(1)$$

$$-152$$

$$60)152(2)$$

$$-120$$

$$32)60(2)$$

$$-32$$

$$28)32(1)$$
Here the last divisor is 4.
$$-28$$

$$4)28(7)$$

$$-28$$

$$0$$

Thus, the HCF of 364 and 576 is 4.

(h) 275,450: Here the first divisor is 275.

$$\begin{array}{r} 275\overline{)}\overline{450(1)} \\ -275 \\ 175)275(1) \\ -175 \\ 100)175(1) \\ -100 \\ \hline 75)100(1) \\ -75 \\ \hline 25)75(3) \\ -75 \\ \hline 0 \end{array}$$

Here the last divisor is 25. Thus, the HCF of 275 and 450 is 25.



(i) 64,128,32: Here the first divisor is 32

32)64(2	32)128(4
-64	-128
0	0

Here the last divisor is also 32. Thus, the HCF of 64,128 and 32 is 32.

(j) 21, 27, 33: Here the first divisor is 21.

21

$$\begin{array}{r}
27(1) \\
\underline{21} \\
6)21(3) \\
-\underline{18} \\
3)6(2) \\
-\underline{6} \\
0 \\
3)33(1) \\
-\underline{3} \\
03)3(1) \\
-\underline{3} \\
03)3(1) \\
-\underline{3} \\
0\end{array}$$
Here the last divisor is 3.

Thus, the HCF of 21, 27 and 33 is 3.

(k) 16,72,90: Here the first divisor is 16

$$\begin{array}{cccc}
16)72(4 & 8)90(11) \\
-\underline{64} & -\underline{8} \\
\underline{-64} & -\underline{8} \\
\underline{-16} & -\underline{8} \\
\underline{-2)8}(4 \\
-\underline{8} \\
\underline{-8} \\$$

Thus, the HCF of 16,72 and 90 is 2. (1) 184, 230, 276: Here the first divisor is 184.

$$\begin{array}{rcl}
184\overline{)230(1)} & 46\overline{)276(6)} \\
 & -\underline{184} & -\underline{276} \\
 & 46\overline{)184(4)} & \underline{-276} \\
 & -\underline{184} & 0 \\
 & -\underline{184} & 0 \\
\end{array}$$
Here the last divisor is 46.

Thus, the HCF of 184,230 and 276 is 46.

- 1. (a) -ii, (b) -i, (c) -iv, (d) -v(e) -iii (f) -viii, (g) -vi, (h) -vii(i) -x, (j) -ix
- 2. Find the LCM of each of the following , using multiple method :

(a) 2,3 Multiples of  $2 = 2, 4, 6, 8, 10, \underline{12}, 14, \dots$ Multiples of  $3 = 3, 6, 9, \underline{12}, 15 \dots$ Common multiples of 2 and  $3 = 6, 12 \dots$  The least common multiple is 6. Thus, the LCM of 2 and 3 is 6.

(b) 5,7

Multiples of 5 = 5, 10, 15, 20, 25, 30, <u>35</u>, 40, 45, 50, 55, 60, 65, <u>70</u>, 75... Multiples of 7 = 7, 14, 21, 28, <u>35</u>, 42, 49, 56, 63, <u>70</u>,... Common multiples of 5 and 7 = 35, 70,... The least common multiple is 35. Thus, the LCM of 5 and 7 is 35.

(c) 6,11

Multiples of 6 = 6, 12, 18, 24, 30, 36, 42, 48, 54, 60, <u>66</u>, 72, 78, 84, 90, 96, 102, 108, 114, 120, 126, <u>132</u>, 138,.... Multiples of 11 = 11, 22, 33, 44, 55, <u>66</u>, 77, 88, 99, 110, 121, <u>132</u>...

Common multiples of 6 and 11 = 66,132...The least common multiple is 66. Thus, the LCM of 6 and 11 is 66.

### (d) 4,3

Multiples of  $4 = 4, 8, \underline{12}, 16, 20, \underline{24}, 28,...$ Multiples of  $3 = 3, 6, 9, \underline{12}, 15, 18, 21, \underline{24}...$ Common multiples of 4 and 3 = 12, 24...The least common multiple is 12. Thus, the LCM of 4 and 3 is 12. (e) 5, 10, 15

Multiples of 5 = 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55,

### <u>60</u>,65.

Multiples of 10 = 10, 20, 30, 40, 50, 60,Multiples of 15 = 15, 30, 45, 60.Common multiples of 5, 10 and 15 = 30, 60, ...The least common multiple is 30. Thus, the LCM of 5, 10 and 15 is 30.

## (f) 2,4,6

Multiples of 2 = 2, 4, 6, 8, 10, <u>12</u>, 14, 16, 18, 20, 22, <u>24</u>, 26,..

Multiples of 4 = 4, 8, 12, 16, 20, 24,...Multiples of 6 = 6, 12, 18, 24,...Common multiples of 2, 4 and 6 = 12, 24,...The least common multiple is 12. Thus, the LCM of 2,4 and 6 is 12.

# (g) 9,3,7

Multiples of 9 = 9, 18, 27, 36, 45, 54, <u>63</u>, 72, 81, 90, 99, 108, 117, <u>126</u>, 135,...

- Multiples of 3 = 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48, 51, 54, 57, 60, <u>63</u>, 66, 69, 72, 75, 78, 81, 84, 87, 90, 93, 96, 99, 102, 105, 108, 111, 114, 117, 120, 123, <u>126</u>.. Multiples of 7 = 7, 14, 21, 28, 35, 42, 49, 56, 63, 70, 77,
- Numples of 7 = 7, 14, 21, 28, 55, 42, 49, 50, <u>05</u>, 70, 77 84, 91, 98, 105, 112, 119, <u>126</u>,... Common multiples of 9,3 and 7 = 63, 26. The least common multiple is 63.

Thus, the LCM of 9,3 and 7 is 63.



- (h) 8,10,12
  - Multiples of 8 = 8, 16, 24, 32, 40, 48, 56, 64, 72, 80, 88, 96, 104, 112, 120, 128, 136, 144, 152, 160, 168, 176, 184, 192, 200, 208, 216, 224, 232, <u>240</u>, 248.
  - Multiples of 10 = 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240...
  - Multiples of 12 = 12, 24, 36, 48, 60, 72, 84, 96, 108, <u>120</u>, 132, 144, 156, 168, 180, 192, 204, 216, 228, 240.

Common multiples of 8, 10 and 12 = 120, 240,...

The least common multiple is 120.

Thus, the LCM of 8,10 and 12 is 120.

- (i) 3,5,6
  - Multiples of 3 = 3, 6, 9, 12, 15, 18, 21, 24, 27, <u>30</u>, 33, 39, 42, 45, 48, 51, 54, 57, <u>60</u>, 63,...
  - Multiples of  $5 = 5, 10, 15, 20, 25, \underline{30}, 35, 40, 45, 50, 55, \underline{60}, ...$
  - Multiples of 6 = 6, 12, 18, 24, <u>30</u>, 36, 42, 48, 54, <u>60</u>, .....

Common multiples of 3,5 and  $6 = 30,60,\ldots$ 

- The least common multiple is 30.
- Thus, the LCM of 3,5 and 6 is 30.
- (j) 4,6,7
  - Multiples of 4 = 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48, 52, 56, 60, 64, 68, 72, 76, 80, <u>84</u>, 88, 92, 96, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 144, 148, 152, 156, 160, 164, <u>168</u>, 172
  - Multiples of 6 = 6, 12, 18, 24, 30, 36, 42, 48, 54, 60, 66, 72, 78, <u>84</u>, 90, 96, 102, 108, 114, 120, 126, 132, 138, 144, 150, 156, 162, <u>168</u>.
  - $\begin{array}{l} \text{Multiples of 7} = 7,\,14,\,21,\,28,\,35,\,42,\,49,\,56,\,63,\,70,\,77,\\ \underline{84},\,91,\,98,\,105,\,112,\,119,\,126,\,133,\\ 140,\,147,\,154,\,161,\underline{168}. \end{array}$
  - Common multiples of 4,6 and  $7 = 84,168,\ldots$
  - The least common multiple is 84.
  - Thus, the LCM of 4,6 and 7 is 84.
- (k) 15,20,25
  - Multiples of 15 = 15, 30, 45, 60, 75, 90, 105, 120, 135, 150, 165, 180, 195, 210, 225, 240, 255, 270, 285, 300, 315, 330, 345, 360, 375, 390, 405, 420, 435, 450, 465, 480, 495,510, 525, 540, 555, 570, 585, 600, 615.
  - $\begin{array}{l} \text{Multiples of } 20 = 20, 40, 60, 80, 100, 120, 140, 160, 180, \\ 200, 220, 240, 260, 280, \underline{300}, 320, 340, \\ 360, 380, 400, 420, 440, 460, 480, 500, \\ 520, 540, 560, 580, \underline{600} \dots \end{array}$
  - Multiples of 25 = 25, 50, 75, 100, 125, 150, 175, 200, 225, 250, 275, 300, 325, 350, 375, 400, 425, 450, 475, 500, 525, 550, $575, 600, \dots$

Common multiples of 15, 20 and 25 = 300,600,...

The least common multiple is 300. Thus, the LCM of 15, 20 and 25 is 300.

- (1) 20,35,40
  - Multiples of 20 = 20, 40, 60, 80, 100, 120, 140, 160, 180, 200, 220, 240, 260, 280, 300, 320, 340, 360, 380, 400, 420, 440, 460, 480, 500, 520, 540, <u>560</u>, 580, 600, 620, 640, 660, 680, 700, 720, 740, 760, 780, 800, 820, 840, 860, 880, 900, 920, 940, 960, 980, 100, 1020, 1040, 1060, 1080, 1100, <u>1120, 1140, ......</u>
  - Multiples of 35 = 35, 70, 105, 140, 175, 210, 245, 280, 315, 350, 385, 420, 455, 490, 525, 560, 595, 630, 665, 700, 735, 770, 805, 840, 875, 910, 945, 980, 1015, 1050, 1085, <u>1120</u>,...
  - Multiples of 40 = 40, 80, 120, 160, 200, 240, 280, 320, 360, 400, 440, 480, 520, <u>560</u>, 600, 640, 680, 720, 760, 800, 840, 880, 920, 960, 1000, 1040, 1080, <u>1120</u>, ....

Common multiples of 20, 35, and 40 = 560, 1120...,

The least common multiple is 560.

Thus, the LCM of 20, 35 and 40 is 560.

**3.** Find the LCM of each of the following, using prime factorisation method:

(a)	20,	30		(b) 15,25				
	Pri	me facto	rs of 20	Prime factors of $15 = 3 \times 5$	_			
	= <u>2</u>	$\times 2 \times 5$						
	Pri	me facto	rs of	Prime factors of				
	$30 = \underline{2} \times 3 \times 5$			25= <u>5</u> × <u>5</u>				
	Working			Working				
	2	20	2 30	3 15 5 25				
	2	10	3 15	5 5 5 5				
	5	5	5 5	1 1				
		1	1					

Thus, the LCM of 20 and 30 Thus, the LCM of 15 and 25 = $2\times2\times5\times3=60$  =  $3\times5\times5=75$ 

(c) 184,200

Prime factors of  $184 = \underline{2} \times \underline{2} \times 2 \times 23$ 

Prime factors of  $200 = 2 \times 2 \times 2 \times 5 \times 5$ 

Working	2	184		2	200
	2	92	_	2	100
	2	46	_	2	50
	23	23	_	5	25
		1	_	5	5
			_		1

Thus, the LCM of 184 and  $200 = 2 \times 2 \times 2 \times 5 \times 5 \times 23 = 4600$ 

(d) 42,84

Prime factors of  $42 = 2 \times 3 \times 7$ Prime factors of  $84 = 2 \times 2 \times 3 \times 7$ 

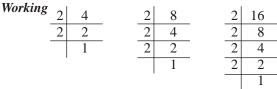
Working	2 42	2	84
	3 21	2	42
	7 7	3	21
	1	7	7
	1		1

Thus, the LCM of 42 and  $84 = 2 \times 2 \times 3 \times 7 = 84$ 

(e) 4,8,16

Prime factors of  $4 = 2 \times 2$ Prime factors of  $8 = 2 \times 2 \times 2$ 

Prime factors of  $16 = 2 \times 2 \times 2 \times 2$ 



Thus, the LCM of 4,8 and  $16 = 2 \times 2 \times 2 \times 2 = 16$ 

(f) 20,60,120

Prime factors of  $20 = 2 \times 2 \times 5$ Prime factors of  $60 = 2 \times 2 \times 3 \times 5$ Prime factors of  $120 = 2 \times 2 \times 2 \times 3 \times 5$ 

Working	2	20	2	60		2	120
_	2	10	 2	30	-	2	60
	5	5	 3	15	-	2	30
		1	 5	5	-	3	15
				1	-	5	5
							1

Thus, the LCM of 20,60 and  $120 = 2 \times 2 \times 3 \times 5 = 120$ 

(g) 15,21,24

Prime factors of  $15 = 3 \times 5$ Prime factors of  $21 = 3 \times \underline{7}$ 

Prime factors of  $24 = 2 \times 2 \times 2 \times 3$ 

Working	3	15		3	21	2	24
	5	5		7	7	2	12
		1	•		1	2	6
						3	3
							1

Thus, the LCM of 15, 21 and  $24 = 2 \times 2 \times 2 \times 3 \times 5 \times 7 = 840$ (h) 35,49,70

Prime factors of  $35 = 5 \times 7$ Prime factors of  $49 = 7 \times 7$ Prime factors of  $70 = 2 \times 5 \times 7$ 

Working 5 25

ng	5	35	7	49	2	70
	7	7	7	7	 5	35
		1		1	 7	7
						1

Thus, the LCM of 35, 49 and  $70 = 2 \times 5 \times 7 \times 7 = 490$ (i) 16,20,32

Prime factors of  $16 = 2 \times 2 \times 2 \times 2$ Prime factors of  $20 = 2 \times 2 \times 5$ Prime factors of  $32 = 2 \times 2 \times 2 \times 2 \times 2$ 

Working	2	16	2	20		2	32	
	2	8	2	10	-	2	16	_
	2	4	5	5	-	2	8	_
	2	2		1	-	2	4	_
		1				2	2	-
							1	-

Thus, the LCM of 16,20 and  $32 = 2 \times 2 \times 2 \times 2 \times 5 = 160$ (j) 64,96,128

Prime factors of  $64 = 2 \times 2 \times 2 \times 2 \times 2 \times 2$ 

Prime factors of  $96 = 2 \times 2 \times 2 \times 2 \times 2 \times 3$ 

Prime factors of  $128 = 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2$ 

### Working

•	2	64		2	96	2	128
	2	32	-	2	48	2	64
	2	16	-	2	24	2	32
	2	8	-	2	12	2	16
	2	4	-	2	6	2	8
	2	2	-	3	3	2	4
		1	-		1	2	2
							1

 $2 \times 3 = 384$ 

(k) 15,20,25,30

Prime factors of  $15 = 3 \times 5$ Prime factors of  $20 = 2 \times 2 \times 5$ Prime factors of  $25 = 5 \times 5$ 

Prime factors of  $30 = 2 \times 3 \times 5$ 

Working

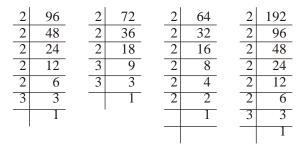
3	15	2	20		5	25	2	30
5	5	2	10		5	5	 3	15
	1	5	5			1	 5	5
			1	_				1

Thus, the LCM of 15,20,25 and 30 =  $2 \times 2 \times 3 \times 5 \times 5$ =300

(1) 96,72,64,192

Prime factors of  $96 = 2 \times 2 \times 2 \times 2 \times 2 \times 3$ Prime factors of  $72 = 2 \times 2 \times 2 \times 3 \times 3$ Prime factors of  $64 = 2 \times 2 \times 2 \times 2 \times 2 \times 2$ Prime factors of  $192 = 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 3$ 

Working



Thus, the LCM of 96,72,64 and 192  $= 2 \times 2 \times 2 \times 2 \times 2 \times 3 \times 3 = 576$ 

49

49

49

49

1

78

39

39

13

13

1

1

4.	Find the	LCM	of	each	of	the	following	,	using	long
	division n	nethod	:							

(b) 8,10,25

8, 10,

2

(a)	35	,49	,70	)		
2	3	35,	49	Э,	70	
$\frac{2}{5}$	3	35,	49	Э,	35	
7		7,	49	Э,	7	
7		1,	7	7,	1	_
		1,	1	1,	1	_
(c)	=2	2×5 5,24, 1	5 × 7 ,32 6,	24	/=4	32
			8,	12	·	16
	2		4,	6	,	8
	2		2,	3	,	4
	2		1,	3	,	2
	3		1.	3		1

(i) 24,32,20,45

2

3

(e) 20,35,40

(g) 35,70,105 2 35,

35, 49, 35	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
7, 49, 7	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
1, 7, 1	5 1, 5, 25
1, 1, 1	5 1, 1, 5
	1, 1, 1
Thus, the LCM = $2 \times 5 \times 7 \times 7 = 490$	Thus, the LCM = $2 \times 2 \times 2 \times 5 \times 5 = 200$
16,24,32	(d) 20,60,120
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
Thus, the LCM = $2 \times 2 \times 2 \times 2 \times 2 \times 3 = 96$	Thus, the LCM = $2 \times 2 \times 2 \times 3 \times 5 = 120$
20,35,40	(f) 18,27,36
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
Thus, the LCM $2 \times 2 \times 2 \times 5 \times 7 = 280$	Thus, the LCM = $2 \times 3 \times 5 \times 7 = 210$
2×2×2×5×7=280	$=2 \times 3 \times 5 \times 7 = 210$
$2 \times 2 \times 2 \times 5 \times 7 = 280$ 35,70,105 $2  35,  70,  105$ $3  35,  35,  105$ $5  35,  35,  35$ $7  7,  7,  7$ $1,  1,  1$ Thus, the LCM	$=2\times3\times5\times7=210$ (h) 25,39,52: $\frac{2 25,39,52}{2 25,39,26}$ $\frac{3 25,39,13}{5 25,13,13}$ $\frac{5 5,13,13}{13 1,13,13}$ $\frac{13 1,13,13}{1,1,1,1}$ Thus, the LCM
$2 \times 2 \times 2 \times 5 \times 7 = 280$ 35,70,105 $2  35, \ 70, \ 105$ $3  35, \ 35, \ 105$ $5  35, \ 35, \ 35$ $7  7, \ 7, \ 7$ $1, \ 1, \ 1$ Thus, the LCM $= 2 \times 3 \times 5 \times 7 = 210$	$=2\times3\times5\times7=210$ (h) 25,39,52: $\frac{2 25,39,52}{2 25,39,26}$ $\frac{3 25,39,13 }{5 25,13,13 }$ $\frac{5 5,13,13 }{13 1,13,13 }$ Thus, the LCM $=2\times2\times3\times5\times5\times13=3900$
$2 \times 2 \times 2 \times 5 \times 7 = 280$ $35,70,105$ $2   35, 70, 105$ $3   35, 35, 105$ $5   35, 35, 35$ $7   7, 7, 7$ $1, 1, 1$ Thus, the LCM $= 2 \times 3 \times 5 \times 7 = 210$ $24,32,20,45$	$=2\times3\times5\times7=210$ (h) 25,39,52: $\frac{2 25,39,52}{2 25,39,26}$ $\frac{3 25,39,13}{5 25,13,13}$ $\frac{5 5,13,13}{13 1,13,13}$ $\frac{13 1,13,13}{1,1,1,1}$ Thus, the LCM $=2\times2\times3\times5\times5\times13=3900$ (j) 42,46,108,144
$2 \times 2 \times 2 \times 5 \times 7 = 280$ 35,70,105 $2  35,  70,  105$ $3  35,  35,  105$ $5  35,  35,  35$ $7  7,  7,  7$ $1,  1,  1$ Thus, the LCM $= 2 \times 3 \times 5 \times 7 = 210$ $24,32,20,45$ $2  24,  32,  20,  45$	$=2\times3\times5\times7=210$ (h) 25,39,52: $\frac{2 25,39,52}{2 25,39,26}$ $\frac{3 25,39,13}{5 25,13,13}$ $\frac{5 5,13,13}{13 1,13,13}$ Thus, the LCM $=2\times2\times3\times5\times5\times13=3900$ (j) 42,46,108,144 2 42,46,108,144
$2 \times 2 \times 2 \times 5 \times 7 = 280$ 35,70,105 $2  35,  70,  105$ $3  35,  35,  105$ $5  35,  35,  35$ $7  7,  7,  7$ $1,  1,  1$ Thus, the LCM $= 2 \times 3 \times 5 \times 7 = 210$ $24,32,20,45$ $2  24,  32,  20,  45$ $2  12,  16,  10,  45$	$=2\times3\times5\times7=210$ (h) 25,39,52: $\frac{2 25,39,52}{2 25,39,26}$ $\frac{3 25,39,13}{5 25,13,13}$ $\frac{5 55,13,13}{13 1,13,13}$ Thus, the LCM $=2\times2\times3\times5\times5\times13=3900$ (j) 42,46,108,144 $\frac{2 42,46,108,144}{2 21,23,54,72}$
$2 \times 2 \times 2 \times 5 \times 7 = 280$ 35,70,105 $2  35, \ 70, \ 105$ $3  35, \ 35, \ 105$ $5  35, \ 35, \ 35$ $7  7, \ 7, \ 7, \ 7$ $1, \ 1, \ 1$ Thus, the LCM $= 2 \times 3 \times 5 \times 7 = 210$ $24,32,20,45$ $2  24, \ 32, \ 20, \ 45$ $2  12, \ 16, \ 10, \ 45$ $2  6, \ 8, \ 5, \ 45$ $2  3, \ 4, \ 5, \ 45$	$=2\times3\times5\times7=210$ (h) 25,39,52: $\frac{2 25,39,52}{2 25,39,26}$ $\frac{3 25,39,13}{5 25,13,13}$ $\frac{5 5,13,13}{13 1,13,13}$ Thus, the LCM $=2\times2\times3\times5\times5\times13=3900$ (j) 42,46,108,144 $\frac{2 42,46,108,144}{2 21,23,54,72}$ $\frac{2 21,23,27,36}{2 21,23,27,36}$
$2 \times 2 \times 2 \times 5 \times 7 = 280$ 35,70,105 $2  35,  70,  105$ $3  35,  35,  105$ $5  35,  35,  35$ $7  7,  7,  7$ $1,  1,  1$ Thus, the LCM $= 2 \times 3 \times 5 \times 7 = 210$ $24,32,20,45$ $2  24,  32,  20,  45$ $2  12,  16,  10,  45$ $2  3,  4,  5,  45$ $2  3,  4,  5,  45$	$=2\times3\times5\times7=210$ (h) 25,39,52: $\frac{2 25,39,52}{2 25,39,26}$ $\frac{3 25,39,13}{5 25,13,13}$ $\frac{5 5,13,13}{13 1,13,13}$ Thus, the LCM $=2\times2\times3\times5\times5\times13=3900$ (j) 42,46,108,144 $\frac{2 42,46,108,144}{2 21,23,54,72}$ $\frac{2 21,23,27,36}{2 21,23,27,36}$
$2 \times 2 \times 2 \times 5 \times 7 = 280$ $35,70,105$ $2  35,  70,  105$ $3  35,  35,  105$ $5  35,  35,  35$ $7  7,  7,  7$ $1,  1,  1$ Thus, the LCM $= 2 \times 3 \times 5 \times 7 = 210$ $24,32,20,45$ $2  24,  32,  20,  45$ $2  24,  32,  20,  45$ $2  24,  32,  20,  45$ $2  24,  32,  20,  45$ $2  24,  32,  20,  45$ $2  24,  32,  20,  45$ $2  24,  32,  20,  45$ $2  24,  32,  20,  45$ $2  26,  8,  5,  45$ $2  3,  4,  5,  45$ $2  3,  2,  5,  45$ $3  3,  1,  5,  45$	$=2\times3\times5\times7=210$ (h) 25,39,52: $\frac{2 25,39,52}{2 25,39,26}$ $\frac{3 25,39,13}{5 25,13,13}$ $\frac{5 5,13,13}{13 1,13,13}$ $\frac{13 1,13,13}{1,1,1,1}$ Thus, the LCM $=2\times2\times3\times5\times5\times13=3900$ (j) 42,46,108,144 $\frac{2 42,46,108,144}{2 21,23,54,72}$ $\frac{2 42,23,27,36}{2 21,23,27,18}$ $\frac{3 21,23,27,9}{3 21,23,27,9 }$
$2 \times 2 \times 2 \times 5 \times 7 = 280$ $35,70,105$ $2  35,  70,  105$ $3  35,  35,  105$ $5  35,  35,  35$ $7  7,  7,  7$ $1,  1,  1$ Thus, the LCM $= 2 \times 3 \times 5 \times 7 = 210$ $24,32,20,45$ $2  24,  32,  20,  45$ $2  12,  16,  10,  45$ $2  6,  8,  5,  45$ $2  3,  2,  5,  45$ $3  3,  1,  5,  45$ $3  2,  1,  5,  15$	$=2\times3\times5\times7=210$ (h) 25,39,52: $\frac{2 25,39,52}{2 25,39,26}$ $\frac{3 25,39,13}{5 25,13,13}$ $\frac{5 5,13,13}{13 1,13,13}$ $\frac{13}{1,1,13,13}$ Thus,the LCM $=2\times2\times3\times5\times5\times13=3900$ (j) 42,46,108,144 $\frac{2 42,46,108,144}{2 21,23,27,36}$ $\frac{2 21,23,27,36}{2 21,23,27,9}$ $\frac{3 21,23,27,9}{3 7,23,9,3}$ $\frac{3 7,23,3,1}{3 7,23,3,1}$
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$=2\times3\times5\times7=210$ (h) 25,39,52: $\frac{2 25,39,52}{2 25,39,26}$ $\frac{3 25,39,13}{5 25,13,13}$ $\frac{5 5,13,13}{13 1,13,13}$ $\frac{13}{1,1,13,13}$ Thus,the LCM $=2\times2\times3\times5\times5\times13=3900$ (j) 42,46,108,144 $\frac{2 42,46,108,144}{2 21,23,27,36}$ $\frac{2 21,23,27,36}{2 21,23,27,9}$ $\frac{3 21,23,27,9}{3 7,23,9,3}$ $\frac{3 7,23,3,1}{3 7,23,3,1}$
$2 \times 2 \times 2 \times 5 \times 7 = 280$ $35,70,105$ $2  35,  70,  105$ $3  35,  35,  105$ $5  35,  35,  35$ $7  7,  7,  7$ $1,  1,  1$ Thus, the LCM $= 2 \times 3 \times 5 \times 7 = 210$ $24,32,20,45$ $2  24,  32,  20,  45$ $2  12,  16,  10,  45$ $2  6,  8,  5,  45$ $2  3,  2,  5,  45$ $3  3,  1,  5,  45$ $3  2,  1,  5,  15$	$=2\times3\times5\times7=210$ (h) 25,39,52: $\frac{2}{2} \frac{25}{25}, \frac{39}{39}, \frac{52}{26}$ $\frac{3}{3} \frac{25}{25}, \frac{39}{13}, \frac{13}{5}$ $\frac{5}{5} \frac{5}{5}, \frac{13}{13}, \frac{13}{13}$ $\frac{13}{1}, \frac{13}{1}, \frac{13}{1}, \frac{13}{1}$ Thus, the LCM $=2\times2\times3\times5\times5\times13=3900$ (j) 42,46,108,144 $\frac{2}{2} \frac{42}{21}, \frac{23}{23}, \frac{54}{27}, \frac{72}{2}$ $\frac{2}{21}, \frac{23}{23}, \frac{27}{27}, \frac{36}{28}$ $\frac{3}{3} \frac{7}{7}, \frac{23}{23}, \frac{3}{1}, \frac{1}{23}$ $\frac{7}{7}, \frac{23}{23}, \frac{1}{1}, \frac{1}{23}$
$\begin{array}{c c c} 2\times2\times2\times5\times7=280\\ 35,70,105\\ \hline 2 & 35, & 70, & 105\\ \hline 3 & 35, & 35, & 105\\ \hline 5 & 35, & 35, & 35\\ \hline 7 & 7, & 7, & 7\\ \hline & 1, & 1, & 1\\ \end{array}$ Thus, the LCM $\begin{array}{c c c} =& 2\times3\times5\times7=210\\ 24,32,20,45\\ \hline 2 & 24, & 32, & 20, & 45\\ \hline 2 & 12, & 16, & 10, & 45\\ \hline 2 & 3, & 2, & 5, & 45\\ \hline 2 & 3, & 4, & 5, & 45\\ \hline 2 & 3, & 2, & 5, & 45\\ \hline 3 & 2, & 1, & 5, & 15\\ \hline 5 & 1, & 1, & 5, & 5\\ \hline & 1, & 1, & 1, & 1\\ \end{array}$ Thus, the LCM	$=2\times3\times5\times7=210$ (h) 25,39,52: $\frac{2}{2} 25, 39, 52$ $\frac{2}{2} 25, 39, 26$ $3 25, 39, 13$ $5 5, 13, 13$ $13 1, 13, 13$ $13 1, 13, 13$ $13 1, 13, 13$ $13 1, 13, 13$ $13 1, 13, 13$ $13 1, 13, 13$ $13 1, 13, 13$ $13 1, 13, 13$ $13 1, 13, 13$ $13 1, 13, 13$ $13 1, 13, 13$ $13 1, 13, 13$ $13 1, 13, 13$ $13 1, 13, 13$ $13 1, 13, 13$ $13 1, 13, 13$ $13 1, 13, 13$ $13 1, 13, 13$ $13 1, 13, 13$ $13 1, 13, 13$ $13 1, 13, 13$ $13 1, 23, 27, 36$ $2 21, 23, 27, 36$ $2 21, 23, 27, 36$ $2 21, 23, 27, 18$ $3 21, 23, 27, 9$ $3 7, 23, 9, 3$ $3 7, 23, 9, 3$ $3 7, 23, 3, 1$ $7 7, 23, 1, 1$ $23 1, 23, 1, 1$ $1, 1, 1, 1$ Thus, the LCM
$\begin{array}{c c c} 2\times2\times2\times5\times7=280\\ 35,70,105\\ \hline 2 & 35, \ 70, \ 105\\ \hline 3 & 35, \ 35, \ 105\\ \hline 5 & 35, \ 35, \ 35\\ \hline 7 & 7, \ 7, \ 7\\ \hline 1, \ 1, \ 1\\ \hline \end{array}$ Thus, the LCM $\begin{array}{c c} =& \\ =& 2\times3\times5\times7=210\\ 24,32,20,45\\ \hline 2 & 24, \ 32, \ 20, \ 45\\ \hline 2 & 12, \ 16, \ 10, \ 45\\ \hline 2 & 3, \ 2, \ 5, \ 45\\ \hline 2 & 3, \ 2, \ 5, \ 45\\ \hline 3 & 3, \ 1, \ 5, \ 45\\ \hline 3 & 2, \ 1, \ 5, \ 15\\ \hline 5 & 1, \ 1, \ 5, \ 5\\ \hline \end{array}$	$=2\times3\times5\times7=210$ (h) 25,39,52: $\frac{2}{2} 25, 39, 52$ $\frac{2}{2} 25, 39, 26$ $3 25, 39, 13$ $5 5, 13, 13$ $13 1, 13, 13$ $13 1, 13, 13$ $13 1, 13, 13$ $13 1, 13, 13$ $13 1, 13, 13$ $13 1, 13, 13$ $13 1, 13, 13$ $13 1, 13, 13$ $13 1, 13, 13$ $13 1, 13, 13$ $13 1, 13, 13$ $13 1, 13, 13$ $13 1, 13, 13$ $13 1, 13, 13$ $13 1, 13, 13$ $13 1, 13, 13$ $13 1, 13, 13$ $13 1, 13, 13$ $13 1, 13, 13$ $13 1, 13, 13$ $13 1, 13, 13$ $13 1, 23, 27, 36$ $2 21, 23, 27, 36$ $2 21, 23, 27, 36$ $2 21, 23, 27, 18$ $3 21, 23, 27, 9$ $3 7, 23, 9, 3$ $3 7, 23, 9, 3$ $3 7, 23, 3, 1$ $7 7, 23, 1, 1$ $23 1, 23, 1, 1$ $1, 1, 1, 1$ Thus, the LCM

ng long	(k) 15,20,30,60
25 25 25 25 5 1	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
200	Thus, the LCM = $2 \times 2 \times 3 \times 5 = 60$ (m) 6,12,24,36
$     \begin{array}{r}             120 \\             60 \\             30 \\             15 \\             5 \\           $	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
5 = 120	Thus, the LCM = $2 \times 2 \times 2 \times 3 \times 3 = 3$
$     \begin{array}{r}       36 \\       \overline{18} \\       9 \\       \overline{3} \\       \overline{1} \\       1 \\       1 \\       1 \\       210 \\       \underline{52} \\       \underline{26} \\       \overline{13} \\       12       \end{array} $	$(0)  66,128,132,220 \\ \begin{array}{c c} 2 & 66, \\ \hline 2 & 33, \\ \hline 3 & 33, \\ \hline 5 & 11, \\ \hline 11 & 11, \\ \hline 1 & 1, \end{array}$
13 13 13 1	Thus, the LCM = $2 \times$
$= 3900$ $= 3900$ $= 8, 144$ $= 4, 72$ $= 7, 36$ $= 7, 18$ $= 7, 9$ $= 9, 3$ $= 3, 1$ $= 1, 1$ $= 1, 1$ $= 1, 1$ $= 1, 1$ $= 4$ $\times 3 \times 3$	1. Here, we have to find HC Factors of $20 = 2 \times 2 \times 5$ Factors of $30 = 2 \times 3 \times 5$ Common factors of 20 ar <i>Working</i> $\frac{2   20}{2   10} \\ \frac{5   5}{5} \\ 1$ Thus, the HCF of 20 and So, the greatest number 10.

36	2	2	68, 102, 117,
18	2	2	34, 51, 117,
9	3	;	17, 51, 117,
9	3	;	17, 17, 39,
3	13	;	17, 17, 13,
1	17	,	17, 17, 1,
			1, 1, 1,

(1) 21,28,35,49

21,

21,

7,

7,

1, 1, 1,

(n) 68,102,117,78

Thus, the LCM

21, 28, 35,

14,

7,

7,

1,

 $=2 \times 2 \times 3 \times 5 \times 7 \times 7 = 2940$ 

35,

35,

35. 7,

> 7, 49

1, 7

1,

2|

2

3

5

7

7

60

30

15

5

1

Thus, the LCM
$= 2 \times 2 \times 2 \times 3 \times 3 = 72$

Thus, the LCM  $= 2 \times 2 \times 3 \times 3 \times 13 \times$ 17 = 7956

### 32,220

2	66,	128,	132,	220
2	33,	64,	66,	110
2	33,	32,	33,	55
2	33,	16,	33,	55
2	33,	8,	33,	55
2	33,	4,	33,	55
2	33,	2,	33,	55
3	33,	1,	33,	55
5	11,	1,	11,	55
11	11,	1,	11,	1
	1,	1,	1,	1

 $LCM = 2 \times 3 \times 5 \times 11 = 21,120$ 

Exercise 4.5

to find HCF of 20 and 30.

 $\underline{2} \times 3 \times \underline{5}$ 

ors of 20 and  $30 = 2 \times 5$ 

2	20	2	30
2	10	3	15
5	5	5	5
	1		1

of 20 and 30 is  $(2 \times 5 =) 10$ .

st number which exactly divides 20 and 30 is



2. Here, we have to find HCF of 25, 40 and 60. Factors of  $25 = 5 \times 5$ 

Factors of  $40 = 2 \times 2 \times 2 \times 5$ 

Factors of  $60 = 2 \times 2 \times 3 \times 5$ 

Common factors of 25,40 and 60 is only 5.

Working	5	25	2	40	2	60
	5	5	2	20	2	30
		1	2	10	3	15
			5	5	5	5
				1		1

Thus, the HCF of 25, 40 and 60 is 5.

So, the greatest number which exactly divides 25,40 and 60 is 5.

3. Here, we have to find LCM of 15,16,18,21 and 42.

2	15,	16,	18,	21,	42	
2	15,	8,	9,	21,	21	
2	15,	4,	9,	21,	21	
2	15,	2,	9,	21,	21	
3	15,	1,	9,	21,	12	
3	5,	1,	3,	7,	7	
5	5,	1,	1,	7,	7	
7	1,	1,	1,	7,	7	
	1,	1,	1,	1,	1	

Thus, the LCM =  $2 \times 2 \times 2 \times 2 \times 3 \times 3 \times 5 \times 7 = 5,040$ So, the least number which exactly divides by 15,16,18,21 and 42 is 5,040.

4. Here, we have to find LCM of 315,819 and 252.

2	315,	819,	252
2	315,	819,	126
3	315,	819,	63
3	105,	273,	21
5	35,	91,	7
7	7,	91,	7
13	1,	13,	1
	1,	1,	1

Thus, the LCM =  $2 \times 2 \times 3 \times 3 \times 5 \times 7 \times 13 = 16,380$ So, the minimum length of the rope which can be divide into the pieces of 315 cm, 819 cm and 252 cm completely is 16,380cm.

5. Here, we have to find LCM of 52, 62 and 72 and then, we will add to it 2, to find the required number.

2	52,	62,	72
2	26,	31,	36
2	13,	31,	18
3	13,	31,	9
3	13,	31,	3
13	13,	31,	1
31	1,	31,	1
	1,	1,	1

Thus, the LCM =  $2 \times 2 \times 2 \times 3 \times 3 \times 13 \times 31 = 29,016$  and, the required number = 29,016+2=29,018

So, the smallest number is 29,018 which, when divided by 52,62 and 72, leaves 2 as remainder.

6. Here, we have to find LCM of 200,300 and 400.

2	200,	300,	400
2	100,	150,	200
2	50,	75,	100
2	25,	75,	50
3	25,	75,	25
5	25,	25,	25
5	5,	5,	5
	1,	1,	1

Thus, the LCM =  $2 \times 2 \times 2 \times 2 \times 3 \times 5 \times 5 = 1200$ So, the least amount of money with which an exact number of toys of each kind can be bought is `1,200.

7. Here, we have to find LCM of 45, 54, 72 and 81.

2	45,	54,	72,	81
2	45,	27,	36,	81
2	45,	27,	18,	81
3	45,	27,	9,	81
3	15,	9,	3,	27
3	5,	3,	1,	9
3	5,	1,	1,	3
5	5,	1,	1,	1
	1,	1,	1,	1

Thus, the LCM =  $2 \times 2 \times 2 \times 3 \times 3 \times 3 \times 3 \times 5 = 3,240$ So, the least quantity of water which can be drawn out using these buckets exact number of times is 3,240 liters.

8. Here, we have to find LCM 160, 180 and 240.

2	160,	180,	240
2	80,	90,	120
2	40,	45,	60
2	20,	45,	30
2	10,	45,	15
3	5,	45,	15
3	5,	15,	5
5	5,	5,	5
	1,	1,	1

Thus, the LCM =  $2 \times 2 \times 2 \times 2 \times 3 \times 3 \times 5 = 1440$ 

So, the shortest length that can be measured exactly using any one of the three rods is  $1440\,\mathrm{cm}.$ 

9. Here, we have to find LCM 10, 15 and 20.

2	10,	15,	20
2	5,	15,	10
3	5,	15,	5
5	5,	5,	5
	1,	1,	1

Thus, the LCM =  $2 \times 2 \times 3 \times 5 = 60$ 

So, after 60 seconds the three bells toll together.

10. Here, we have to find LCM of 30 and 40.

	~	
Thus, the LCM = $2 \times 2 \times 2 \times 3 \times 5 = 120$	2	
So, the greatest 4-digit number that is exactly	2	
divisible by 30 as well as 40 is 1200.	3	
	5	

2	30,	40
2	15,	20
2	15,	10
3	15,	5
5	5,	5
	1,	1



### Solve the following problems:

- 1. Here, Product of two numbers  $(A \times B) = 160$ , LCM = 40, HCF = ?
  - We have,  $HCF \times LCM = A \times B$ , So

$$HCF = \frac{A \times B}{LCM}$$
$$HCF = \frac{160}{40} = 40$$

Thus, the HCF of two numbers is 40.

2. Here , LCM = 242, HCF = 11, one number(A) = 22, other number(B) = ?

We have,  $HCF \times LCM = A \times B$ , So

$$B = \frac{HCF \times LCM}{A}$$
$$B = \frac{242 \times 11}{22} = 11 \times 11 = 121$$

Thus, the other number is 121.

3. Here, Product of two numbers (A×B) = 2,688, HCF = 8, LCM = ?

We have,  $HCF \times LCM = A \times B$ , So

$$LCM = \frac{A \times B}{HCF}$$
$$= \frac{2688}{8} = 336$$

So, the LCM of the two numbers is 336.
4. Here, HCF = 82, LCM = 2,44,188, one number(A) =1,428, other number(B) =?

We have,  $HCF \times LCM = A \times B$ , So

Other number (B) = 
$$HCF \times LCM$$

=

$$\frac{82 \times 2,44,188}{1,428} = 82 \times 171 = 14,022$$

So, the other number is 14,022.

5. Here, one number (A) = 75, other number (B) = 150, HCF = 75, LCM = ? We have, HCF × LCM = A × B, So

$$LCM = \frac{A \times B}{HCF}$$

$$=\frac{75\times150}{75}=150$$

75 Thus, the LCM of the numbers is 150.

 Here, Product of two numbers(A×B) = 45,000, HCF = 25, LCM=?
 We have UCF + LCM - A + B - Se

We have,  $HCF \times LCM = A \times B$ , So

$$LCM = \frac{A \times B}{HCF}$$
$$= \frac{45,000}{25} = 1,800$$

So, the LCM of the two numbers is 1800.

7. Here, LCM = 8,125, HCF = 25, one number(A) = 325, other number(B) = ?

We have, HCF  $\times$  LCM = A  $\times$  B, So

$$B = \frac{HCF \times LCM}{A}$$
$$= \frac{25 \times 8,125}{325} = 25 \times 25 = 625$$

So, the other number is 625.

### 1. Write all the factors of:

- $1 \times 92 = 92, 2 \times 46 = 92, 4 \times 23 = 92, 1, 2, 4, 23, 46$  and 92.
- (c) Factors of 120  $1 \times 120 = 120, 2 \times 60 = 120, 3 \times 40 = 120, 4 \times 30 = 120, 5 \times 24 = 120, 6 \times 20 = 120, 8 \times 15 = 120, 10 \times 12 = 120, 1, 2, 3, 4, 5, 6, 8, 10, 12, 15, 20, 24, 30, 40, 60 and 120.$

### 2. Write the first 7 multiples of:

- (a) The first 7 multiples of 8  $8 \times 1 = 8, 8 \times 2 = 16, 8 \times 3 = 24, 8 \times 4 = 32, 8 \times 5 = 40,$   $8 \times 6 = 48, 8 \times 7 = 56$ 8,16,24,32,40,48,56
- (b) The first 7 multiple of 15 15×1=15, 15×2=30, 15×3=45, 15×4=60, 15×5=75, 15×6=90, 15×7=105 15, 30, 45,60,75,90,105
- (c) The first 7 multiple of 19  $19 \times 1 = 19, 19 \times 2 = 38, 19 \times 3 = 57, 19 \times 4 = 76,$   $19 \times 5 = 95, 19 \times 6 = 114, 19 \times 7 = 133$ 19, 38, 57, 76, 95, 114, 133
- 3. Using divisibility test, find which of the following numbers are divisible by:
  - (a) 936
    - (i) The number has 6 at its ones place, so it is divisible by 2
    - (ii) The total of its digits of the number (9+3+6=18) is divisible by 3. So, the number is divisible by 3.
    - (iii) The number has not 0 or 5 at its ones place, so it is not divisible by 5.
    - (iv) The total of its digits of the number (9+3+6=18) is divisible by 9. So, the number is divisible by 9.
    - (v) The number has not 0 at its ones place, so it is not divisible by 10
  - (b) 3414
    - (i) The number has 4 at its ones place, so it is divisible by 2
    - (ii) The total of its digits of the number (3+4+1+4=12) is divisible by 3. So, the number is divisible by 3.

- (iii) The number has not 0 or 5 at its ones place, so it is not divisible by 5.
- (iv) The total of its digits of the number (3+4+1+4=12) is not divisible by 9. So, the number is not divisible by 9.
- (v) The number has not 0 at its ones place, so it is not divisible by 10
- (c) 839120
  - (i) The number has 0 at its ones place, so it is divisible by 2
  - (ii) The total of its digits of the number (8 + 3 + 9 + 1 + 2 + 0 = 23) is not divisible by 3. So, the number is not divisible by 3.
  - (iii) The number has 0 at its ones place, so it is divisible by 5.
  - (iv) The total of its digits of the number (8 + 3 + 9 + 1 + 2 + 0 = 23) is not divisible by 9. So, the number is not divisible by 9.
  - (v) The number has 0 at its ones place, so it is divisible by 10
- (d) 806389
  - (i) The number has not 0, 2, 4, 6 or 8 at its ones place, so it is not divisible by 2
  - (ii) The total of its digits of the number (8+0+6+3+8+9=34) is not divisible by 3. So, the number is not divisible by 3.
  - (iii) The number has not 0 or 5 at its ones place, so it is not divisible by 5.
  - (iv) The total of its digits of the number (8+0+6+3+8+9=34) is not divisible by 9. So, the number is not divisible by 9.
  - (v) The number has not 0 at its ones place, so it is not divisible by 10.

### 4. Answer the following:

- (a) The three prime numbers between 1 and 60 (19, 29 and 59) Have their unit digit as 9.
- (b) 9 is the smallest odd composite number.
- (c) 7+13; 13+17
- (d) True.

# 5. Find the HCF of the following by prime factorisation method:

(a) 18,12

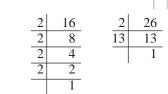
The prime factors of  $18 = \underline{2} \times \underline{3} \times \underline{3}$ The prime factors of  $12 = \underline{2} \times 2 \times \underline{3}$ Common prime factors of 18 and  $12 = 2 \times 3$ 

Working :	2	18	2	12
	3	9	2	6
	3	3	 3	3
		1		1

Thus, the HCF of 18 and 12 is  $(2 \times 3=) 6$ .

(b) 16,26

The prime factors of  $16 = 2 \times 2 \times 2 \times 2$ The prime factors of  $26 = 2 \times 13$ Common prime factors of 16 and 26 is only 2



Thus, the HCF of 16 and 26 is 2. (c) 6,9,15

The prime factors of  $6=2\times 3$ 

The prime factors of  $9=3\times3$ 

The prime factors of  $15 = 3 \times 5$ 

Common prime factors of 6,9 and 15 is only 3

Working :	2	6		3	9	3	15
	3	3	-	3	3	5	1
		1	-		1		

Thus, the HCF of 6,9 and 15 is 3.

(d) 30, 15, 65

Working

The prime factors of  $30 = 2 \times 3 \times 5$ The prime factors of  $15 = 3 \times 5$ The prime factors of  $65 = 5 \times 13$ Common prime factors of 30, 15 and 65 is only 5

Working :

2	30	3	15	5	65
3	15	5	5	13	13
5	5		1		1
	1	•			

Thus, the HCF of 30,15 and 65 is 5.

- 6. Find the HCF of the following by long division method:
  - (a) 56, 70: Here, 56 is the first divisor

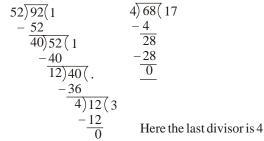
$$56\overline{)70(1)} - \frac{56}{14} - \frac{56}{14} - \frac{56}{0}$$
 Here the last divisor is 14

Thus, the HCF of 56 and 70 is 14.

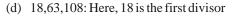
(b) 65,91: Here, 65 is the first divisor

$$\begin{array}{r}
65\overline{)91(1)} \\
-\underline{65} \\
26)65(2) \\
-\underline{52} \\
13)26(2) \\
-\underline{26} \\
0
\end{array}$$
Here the last divisor is 13

Thus, the HCF of 65 and 91 is 13.



Thus, the HCF of 92,68 and 52 is 4.



8)63(3	
-54	
9)18(2	
-18	Here the last divisor is 9
0	
	$-\frac{54}{9)18(2)}$

Thus, the HCF of 18,63 and 108 is 9.

7. Find the HCF of the following by factor method:

(a) 12.18

Factors of  $12 \rightarrow 1 \times 12 = 12, 2 \times 6 = 12, 3 \times 4 = 12$ 1, 2, 3, 4, 6, 12Factors of  $18 \rightarrow 1 \times 18 = 18, 2 \times 9 = 18, 3 \times 6 = 18$ <u>1, 2, 3, 6, 9, 18</u> Common factors of 12 and 18 = 1, 2, 3 and 6. Thus, the HCF of 12 and 18 = 6(b) 90,108 Factors of  $90 \rightarrow 1 \times 90 = 90, 2 \times 45 = 90, 3 \times 30 = 90$ ,

 $5 \times 18 = 90, 6 \times 15 = 90, 9 \times 10 = 90$ <u>1,2,3,5,6,9,10,15,18,30,45,90</u>

Factors of  $108 \rightarrow 1 \times 108 = 108, 2 \times 54 = 108$ ,  $3 \times 36 = 108, 4 \times 27 = 108,$  $6 \times 18 = 108.9 \times 12 = 108$ <u>1, 2, 3, 4, 6, 9, 12, 18, 27, 36, 54, 108</u>

Common factors of 90 and 108 = 1, 2, 3, 6, 9 and 18 Thus the HCF of 108 and 90 = 18

(c) 16,72,80

- Factors of  $16 \rightarrow 1 \times 16 = 16, 2 \times 8 = 16, 4 \times 4 = 16$ <u>1, 2, 4, 8, 16</u> Factors of 72  $\rightarrow$  1 × 72 = 172, 2 × 36 = 72, 3 × 24 = 72,  $4 \times 18 = 72$ ,  $6 \times 12 = 72$ ,  $\underline{8} \times 9 = 72$ 1, 2, 3, 4, 6, 8, 9, 12, 18, 24, 36, 72 Factors of  $80 \rightarrow 1 \times 80 = 80, 2 \times 40 = 80, 4 \times 20 = 80,$  $5 \times 16 = 80, 8 \times 10 = 80$ 1, 2, 4, 5, 8, 10, 16, 20, 40, 80 Common factors of 16, 72 and 80 = 1,2,4 and 8 Thus the HCF of 16,72 and 80=8
- (d) 24,96,48

Factors of  $24 \rightarrow 1 \times 24 = 24$ ,  $2 \times 12 = 24$ ,  $3 \times 8 = 24$ ,  $4 \times 6 = 24$ <u>1,2,3,4,6,8,12,24</u> Factors of  $96 \rightarrow 1 \times 96 = 96$ ,  $2 \times 48 = 96$ ,  $3 \times 32 = 96$ ,  $4 \times 24 = 96, 6 \times 16 = 96, 8 \times 12 = 96$ <u>1,2,3,4,6,8,12,16,24,32,48,96</u> Factors of  $48 \rightarrow 1 \times 48 = 48$ ,  $2 \times 24 = 48$ ,  $3 \times 16 = 48$ ,  $4 \times 12 = 48, 6 \times 8 = 48$ 1, 2, 3, 4, 6, 8, 12, 16, 24, 48 Common factors of 24,96 and 48 = 1, 2, 3, 4, 6, 8, 12 and 24

Thus the HCF of 24, 96 and 48 = 24

## 8. Find the LCM of the following by multiple method:

(a) 6,11

Multiples of 6 = 6, 12, 18, 24, 30, 36, 42, 48, 54, 60,66, 72, 78, 84, 90, 96, 102, 108, 114, 92

120, 126, 132, 138 Multiples of 11= 11, 22, 33, 44, 55, 66, 77, 88, 99, 110, 121, <u>132</u>,..... Common multiples of 6 and 11=66,132,.... The least common multiple is 66 Thus, the LCM of 6 and 11 is 66. (b) 15,20 Multiples of 15= 15, 30, 45, 60, 75, 90, 105, 120, 135 Multiples of 20= 20, 40, 60, 80, 100, 120 Common multiples of 15 and  $20 = 60, 120, \ldots$ The least common multiple is 60 Thus, the LCM of 15 and 20 is 60. (c) 9, 3, 7 Multiples of 9= 9, 18, 27, 36, 45, 54, <u>63</u>, 72, 81, 90, 99, 108, 117, <u>126</u>, 135 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, Multiples of 3=36, 39, 42, 45, 488, 51, 54, 57, 60, 63, 66, 69, 72, 75, 78, 81, 84, 87, 90, 93, 96, 99, 102, 105, 108, 111, 114, 117, 120, 123, <u>126</u> Multiples of 7= 7, 14, 21, 28, 35, 42, 49, 56, <u>63</u>, 70, 77, 84, 91, 98, 105, 112, 119, 126 Common multiples of 9, 3 and  $7 = 63, 126, \ldots$ The least common multiple is 63 Thus, the LCM of 9, 3 and 7 is 63. (d) 8,10,12 Multiples of 8= 8, 16, 24, 32, 40, 48, 56, 64, 72, 80, 88, 96, 104, 112, 120, 128, 136, 144, 152, 160, 168, 176, 184, 192, 200, 208, 216, 224, 232, 240, 248,..... Multiples of 10 = 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110,120, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240... Multiples of 12 = 12, 24, 36, 48, 60, 72, 84, 96, 108, 120,132, 144, 156, 168, 180, 192, 204, 216, 228, <u>240</u>,... Common multiples of 8,10 and 12 = 120,240,... The least common multiple is 120. Thus, the LCM of 8,10 and 12 is 120. 9. Find the LCM of the following by prime factorisation method: (a) 12,18 Prime factors of  $12 = 2 \times 2 \times 3$ Prime factors of  $18 = 2 \times 3 \times 3$ Working : 12 6 3 3

Thus, the LCM of 12 and  $18 = 2 \times 2 \times 3 \times 3 = 36$ 

(b) 14,21

Prime factors of $14 = 2 \times 7$	2	14	3	21
Prime factors of $21 = 3 \times 7$	7	7	7	7
Working :		1		1

Thus, the LCM of 14 and  $21=2 \times 3 \times 7=42$ 



(c) 11, 22, 44

Prime factors of  $11 = \underline{11}$ Prime factors of  $22 = 2 \times 11$ 

Prime factors of  $44 = 2 \times 2 \times 11$ 

111111111111111111111111111111111111						
Working :	11	11	2	22	2	44
		1	11	11	2	22
				1	11	11
						1

Thus, the LCM of 11, 22 and  $44 = 2 \times 2 \times 11 = 44$ 

(d) 8, 12, 24

Prime factors of  $8 = 2 \times 2 \times 2$ 

Prime factors of  $12 = 2 \times 2 \times 3$ 

Prime factors of  $24 = 2 \times 2 \times 2 \times 3$ 

Working :	2	8		2	12	2	24
	2	4	-	2	6	2	12
	2	2	-	3	3	2	6
		1	-		1	3	3
	I			I			1

(b) 16,22

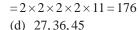
Thus, the LCM of 8, 12 and  $24 = 2 \times 2 \times 2 \times 3 = 24$ 

### 10. Find the LCM of the following by long division method:



2	18,	24	2	16,
2	9,	12	2	8,
2	9,	6	2	4,
3	9,	3	2	2,
3	3,	1	11	1,
	1,	1		1,

Thus, the LCM =  $2 \times 2 \times 2 \times 3 \times 3 = 72$ (c) 36,42,48



Thus, the LCM

-	- ,	, -			<b>(</b> )	/	. , ,
2	2	36,	42,	48		2	27
2	2	18,	21,	24	-	2	27
2	2	9,	21,	12	-	3	27
2	2	9,	21,	6		3	9
3	3	9,	21,	3	_	3	3
3	3	3,	7,	1		5	1
7	7	1,	7,	1			1
		1	1	1	-		

	Thus, the LCM
1008	$= 2 \times 2 \times 3 \times 3 \times 3$



36,

18,

9, 3,

1,

1,

1.

45

 $\frac{45}{45}$ 

15

5

5

1

**11.** Here, HCF= 144, LCM= 2880, one number(A)= 576, other number(B)= ?

We have,  $HCF \times LCM = A \times B$ , so

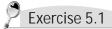
 $= 2 \times 2 \times 2 \times 2 \times 3 \times 3 \times 7 =$ 

Thus, the LCM

$$B = \frac{\text{HCF} \times \text{LCM}}{\text{A}}$$
$$= \frac{144 \times 2880}{576} = 144 \times 5 = 720$$

5

## **Mental Arithmetic**



### 1. Round the numbers to nearest tens:

To round the number to a	nearest tens,	we see t	the digit at its
ones place.			

- (a) 8<u>7</u> : Here, 7 is more than 5, so 87 is rounded up to the nearest tens as 90.
- (b) 324 : Here, 4 is less than 5, so 324 is rounded down to the nearest tens as 320.
- (c) 6905 : Here, the ones digit is equal to 5, so 6905 is rounded up to the nearest tens as 6910.
- (d) 93402 : Here, 2 is less than 5, so 93402 is rounded down to the nearest tens as 93400.

### 2. Round the numbers to nearest hundreds

To round the number to nearest hundreds, we see the digit at its tens place.

- (a)  $\underline{96}$  : Since 9 > 5, so 96 is rounded up to the nearest hundreds as 100.
- (b)  $4\underline{0}9$  : Since 0 < 5, so 409 is rounded down to the nearest hundreds as 400.
- (c)  $80\underline{6}5$  : Since 6>5, so 8065 is rounded up to the nearest hundreds as 8100.
- (d)  $714\underline{0}5$  : Since 0 < 5, so 71405 is rounded down to the nearest hundreds as 71400.

### 3. Round the numbers to nearest thousands :

To round the number to nearest thousands, we see the digit at its hundreds place.

- (a)  $1\underline{2}79$  : Since 2 < 5. So 1279 is rounded down to the nearest thousand as 1000.
- (b)  $86\underline{4}09$  : Since 4 < 5, so 86409 is rounded down to the nearest thousand as 8600.
- (c)  $50\underline{5}05$  : Since 5 = 5, so 36984 is rounded up to the nearest thousand as 51000.
- (d)  $36\underline{9}84$  : Since 9 > 5, so 36984 is rounded up to the nearest thousand as 37000.

### 4. Round the numbers to nearest ten thousands :

To round the number to nearest ten thousands, we see the digit at its thousands place.

- (a)  $4\underline{0}640$  : Since 0 < 5, so 40640 is rounded down to the nearest ten thousands as 40000.
- (b)  $78\underline{9}408$  : Since 9 > 5, so 789408 is rounded up to the nearest ten thousands as 790000.
- (c)  $910\underline{5}632$ : Since 5 = 5, so 9105632 is rounded up to the nearest ten thousands as 9110000.
- (d)  $1\underline{2}794$  : Since 2 < 5, so 12794 is rounded down to the nearest ten thousands as 10000.

532

598.

481

## 5. Circle the numbers that can be rounded to 500:

450



449,



- 6. Rewrite the statement as per the conditions in the brackets:
  - (a) The number of month is 9, which is more than half year (that is, 6). So, 15 year 9 month 10 days is rounded up to 16 years. Thus, the statement will be: "Pooja has 16 years of work experience".
  - (b) The number of minutes is 40, which is more than half an hour (that is,30). So 2 hours 40 minutes is rounded up to 3 hours. Thus, the statement will be: "Paras sees movie for 3 hours."



- 1. Estimate the sum or the difference by rounding the number to the nearest tens:
  - (a) 389+502

Estimated sum = 390 + 500 = 890

- (b) 1187-609 Estimated difference = 1190-610=580
- (c) 2468 + 1013 Estimated sum = 2470+1010=3480

(d) 4419-3684

Estimated difference = 4420 - 3680 = 740

- (e) 8879 + 544Estimated sum = 8880 + 540 = 9420
- (f) 746–282 Estimated difference = 750–280=470
- 2. Estimated the sum or the difference by rounding the numbers to the nearest hundreds:
  - (a) 736–494

Estimated difference = 700 - 500 = 200

- (b) 2879 + 96Estimated sum = 2900 + 100 = 3000
- (c) 5269-524 Estimated difference = 5300-500 = 4800
- (d) 9786+145 Estimated sum = 9800+100 = 9900
- (e) 3272 + 1069 Estimated sum = 3300 + 1100 = 4400

(f) 9866-6666 Estimated difference = 9900-6700 = 3200

- 3. Estimated the sum or the difference by rounding the numbers to the nearest thousand:
  - (a) 6544 + 3821 Estimated sum = 7000 + 4000 = 11000
  - (b) 12970 + 7463Estimated sum = 13000 + 7000 = 20000
  - (c) 35847 3584
     Estimated difference = 36000 4000 = 32000

- (d) 20658-14203 Estimated difference = 21000-14000 = 7000
- (e) 1013 + 5497 Estimated sum = 1000 + 5000 = 6000
- (f) 9520-7342 Estimated difference = 10000-7000 = 3000

Exercise 5.3

- 1. Estimate the product by rounding the numbers to the nearest tens:
  - (a)  $65 \times 25$ Estimated product =  $70 \times 30 = 2100$
  - (b)  $189 \times 32$ Estimated product =  $190 \times 30 = 5700$
  - (c)  $504 \times 19$ Estimated product =  $500 \times 20 = 10000$
  - (d)  $88 \times 36$ Estimated product =  $90 \times 40 = 3600$
  - (e) 206×8 Estimated product = 210×10=2100
     (f) 362×52
    - Estimated product =  $360 \times 50 = 1800$

# 2. Estimate the product by rounding the numbers to the nearest hundreds:

- (a)  $469 \times 320$ Estimate product =  $500 \times 300 = 1,50,000$
- (b)  $245 \times 98$ Estimate product =  $200 \times 100 = 2,00,000$
- (c)  $386 \times 128$ Estimate product =  $400 \times 100 = 4,00,000$
- (d) 147×663
  Estimate product = 100×700 = 7,00,000
  (e) 292×540
  - Estimate product =  $300 \times 500 = 1,50,000$
- (f)  $810 \times 230$ Estimate product =  $800 \times 200 = 1,60,000$
- 3. Estimate the quotient by rounding the numbers to the nearest tens:
  - (a) 72÷7 Estimated quotient = 70÷10=7
    (b) 479÷78 Estimated quotient = 480÷80=6
  - (c)  $496 \div 52$ Estimated quotient =  $500 \div 50 = 10$ (d)  $836 \div 38$ 
    - Estimated quotient =  $840 \div 40 = 21$
  - (e)  $523 \div 19$ Estimate quotient =  $520 \div 20 = 26$
  - (f)  $64 \div 9$ Estimated quotient =  $60 \div 10 = 6$



## Fractions

# Exercise 6.1

- Shade the fractional part asked and write the fraction in 1. the boxes :
  - (a)  $\frac{2}{6}$ (b)  $\frac{5}{8}$ (c)  $\frac{3}{9}$

6

- 2. Write the numerator and denominator of the following fractions:
  - (a) In  $\frac{3}{7}$ , Numerator = 3, Denominator = 7 (b) In  $\frac{2}{6}$ , Numerator = 2, Denominator = 6 (c) In  $\frac{5}{13}$ , Numerator = 5, Denominator = 13 (d) In  $\frac{4}{7}$ , Numerator = 4, Denominator = 7 (e) In  $\frac{11}{15}$ , Numerator = 11, Denominator = 15
  - (f) In  $\frac{8}{25}$ , Numerator = 8, Denominator = 25
- 3. Write the following fractions in words :

(a) 
$$\frac{3}{5}$$
 = Three upon five or three-fifths  
(b)  $\frac{1}{5}$  = One upon five or one-fifths  
(c)  $\frac{2}{7}$  = Two upon seven or two-sevenths  
(d)  $\frac{11}{15}$  = Eleven upon fifteen or eleven-fifteenths  
(e)  $\frac{6}{10}$  = Six upon ten or six-tenths  
(f)  $\frac{4}{8}$  = Four upon eight or four-eights

4. Identify the following fractions and name them as improper/proper unit/mixed, etc:

(a) 
$$\frac{1}{3}$$
 = Proper or unit fraction  
(b)  $\frac{2}{7}$  = Proper fraction  
(c)  $\frac{3}{11}$  = Proper fraction  
(d)  $\frac{8}{14}$  = Proper fraction  
(e)  $\frac{10}{8}$  = Improper fraction  
(f)  $3\frac{1}{5}$  = Mixed fraction  
(g)  $3\frac{1}{8}$  = Mixed fraction

- (h)  $\frac{14}{10}$  = Improper fraction
- (i)  $\frac{3}{5}$  = Proper fraction
- (j)  $\frac{22}{21}$  = Improper fraction
- (k)  $\frac{1}{50}$  = Proper or unit fraction
- (l)  $2\frac{1}{6}$  = Mixed fraction

(m) 
$$\frac{11}{33}$$
 = Proper fraction

(n)  $2\frac{1}{50}$  = Mixed fraction

(o) 
$$4\frac{5}{5}$$
 = Mixed fraction

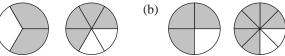
(p)  $6\frac{1}{4}$  = Mixed fraction

(q) 
$$\frac{11}{20}$$
 = Proper fraction  
(r)  $6\frac{2}{10}$  = Mixed fraction

(r) 
$$6\frac{1}{15}$$
 = Mixed fraction

(a)

5. Shade the equivalent fractions :



### Write the next three equivalent fractions: 6.

(a)	$\frac{4}{8}, \frac{5}{10}, \frac{6}{12}$	(b)	$\frac{4}{12}, \frac{5}{15}, \frac{6}{18}$ (c	$\frac{8}{20}, \frac{10}{25}, \frac{12}{30}$
(d)	$\frac{8}{28}, \frac{10}{35}, \frac{12}{42}$	(e)	$\frac{12}{28}, \frac{15}{35}, \frac{18}{42}$ (f	$\frac{8}{44}, \frac{10}{55}, \frac{12}{66}$

7. Replace the box in each of the following by the correct number:

(a) 
$$\frac{4}{7} = \frac{16}{\Box}$$

Since  $4 \times 4 = 16$ , so we multiply 4 by 4 and also, 7 by 4.

$$\frac{4}{7} = \frac{4 \times 4}{7 \times 4} = \frac{16}{28}$$
  
Thus,  $\frac{4}{7} = \frac{16}{28}$   
(b)  $\frac{2}{3} = \frac{\Box}{9}$   
Since  $3 \times 3 = 9$ , so we multiply 3 by 3 and also, 2 by 3.  
 $\frac{2}{3} = \frac{2 \times 3}{3 \times 3} = \frac{6}{9}$   
Thus,  $\frac{2}{3} = \frac{6}{9}$   
(c)  $\frac{4}{6} = \frac{\Box}{36}$   
Since  $6 \times 6 = 36$ , so we multiply 6 by 6 and also, 4 by 6.  
Thus,  $\frac{4}{6} = \frac{4 \times 6}{6 \times 6} = \frac{24}{36}$   
 $\frac{4}{6} = \frac{24}{36}$ 

6 36

(d)  $\frac{4}{7} = \frac{1}{14}$ Since  $7 \times 2 = 14$ , so we multiply 7 by 2 and also, 4 by 2.  $\frac{4}{7} = \frac{4 \times 2}{7 \times 2} = \frac{8}{14}$ Thus,  $\frac{4}{7} = \frac{8}{14}$ (e)  $\frac{15}{20} = \frac{\Box}{40}$ Since  $20 \times 2 = 40$ , so we multiply 20 by 2 and also, 15 by 2.  $\frac{15}{20} = \frac{15 \times 2}{20 \times 2} = \frac{30}{40}$ Thus,  $\frac{15}{20} = \frac{30}{40}$ (f)  $\frac{21}{35} = \frac{3}{\Box}$ Since,  $21 \div 7 = 3$ , so we divide 21 by 7 and also, 35 by 7.  $\frac{21}{35} = \frac{21 \div 7}{35 \div 7} = \frac{3}{5}$ Thus,  $\frac{21}{35} = \frac{3}{5}$ 8. Verify whether the following pairs of fractions are equivalent or not: (a) Given fractions are  $\frac{8}{15}$  and  $\frac{40}{75}$ . We have,  $8 \times 75 = 600$  and  $15 \times 40 = 600$ Thus,  $8 \times 75 = 15 \times 40$ Hence, given fractions are equivalent. (b) Given fractions are  $\frac{1}{2}$  and  $\frac{5}{10}$ . We have,  $1 \times 10 = 10$  and  $2 \times 5 = 10$ Thus,  $1 \times 10 = 2 \times 5$ Hence, given fractions are equivalent. (c) Given fractions are  $\frac{6}{7}$  and  $\frac{12}{14}$ . We have,  $6 \times 14 = 84$  and  $7 \times 12 = 84$ Thus,  $6 \times 14 = 7 \times 12$ Hence, given fractions are equivalent (d) Given fractions are  $\frac{12}{44}$  and  $\frac{21}{76}$ . We have,  $12 \times 76 = 912$  and  $44 \times 21 = 924$ Thus,  $12 \times 76$  is not equal to  $44 \times 21$ Hence, given fractions are not equivalent (e) Given fractions are  $\frac{1}{8}$  and  $\frac{7}{54}$ . We have,  $1 \times 54 = 54$  and  $8 \times 7 = 56$ Thus,  $1 \times 54$  is not equal to  $8 \times 7$ Hence, given fractions are not equivalent

(f) Given fractions are  $\frac{3}{10}$  and  $\frac{6}{20}$ . We have,  $3 \times 20 = 60$  and  $10 \times 6 = 60$ Thus,  $3 \times 20 = 10 \times 6$ Hence, given fractions are equivalent

	P Exerci	se 6.2
1.	(a) $2\frac{1}{2}$	(b) $6\frac{4}{10}$
	$= \frac{(2 \times 2) + 1}{2} = \frac{5}{2}$	$=\frac{(10\times 6)+4}{10}=\frac{64}{10}$
	(c) $5\frac{8}{16}$	(b) $7\frac{2}{7}$
	$= \frac{(16 \times 5) + 8}{16} = \frac{88}{16}$	$= \frac{(7 \times 7) + 2}{7} = \frac{51}{7}$
	(e) $3\frac{1}{3}$	(f) $7\frac{1}{2}$
	$=\frac{(3\times3)+1}{3}=\frac{10}{3}$	$= \frac{(7 \times 2) + 1}{2} = \frac{15}{2}$
	(g) $4\frac{3}{6}$	(h) $2\frac{4}{10}$
	$= \frac{(6 \times 4) + 3}{6} = \frac{27}{6}$	$=\frac{(10\times2)+4}{10}=\frac{24}{10}$
	(i) $6 \frac{4}{12}$	(j) $9\frac{1}{3}$
	$= \frac{(12 \times 6) + 4}{12} = \frac{76}{12}$	$= \frac{(9 \times 3) + 1}{3} = \frac{28}{3}$
	(k) $8\frac{3}{6}$	(1) $7\frac{2}{4}$
	$=\frac{(6\times 8)+3}{6}=\frac{51}{6}$	$= \frac{(4 \times 7) + 2}{4} = \frac{30}{4}$
	(m) $3\frac{2}{3}$	(n) $5\frac{4}{7}$
	$=\frac{(3\times3)+2}{3}=\frac{11}{5}$	$= \frac{(7 \times 5) + 4}{7} = \frac{39}{7}$
	(o) $4\frac{8}{9}$	(p) $1\frac{3}{11}$
	$= \frac{(9 \times 4) + 8}{9} = \frac{44}{9}$	$= \frac{(11 \times 1) + 3}{11} = \frac{14}{11}$
2.	(a) $\frac{11}{3}$ $3\overline{)11}$	(b) $\frac{8}{5}$ $5\overline{)8}($ = $1\frac{3}{5}$
	$=3\frac{2}{3}$ $\frac{9}{2}$	$=1\frac{3}{5}$

(c) 
$$\frac{19}{10} \cdot 10\frac{1}{19}$$
  
 $= 1\frac{9}{10} \cdot \frac{10}{9}$   
 $= 1\frac{9}{10} \cdot \frac{10}{9}$   
 $= 1\frac{2}{11} \cdot \frac{11}{2}$   
(e)  $\frac{11}{4} \cdot 4\frac{21}{411}$   
 $= 2\frac{3}{4} \cdot \frac{8}{3}$   
 $= 1\frac{4}{8} \cdot \frac{8}{4}$   
 $= 2\frac{2}{7} \cdot \frac{14}{2}$   
(g)  $\frac{12}{8} \cdot 8\frac{1}{12}$   
 $= 1\frac{4}{8} \cdot \frac{8}{4}$   
 $= 2\frac{2}{7} \cdot \frac{14}{2}$   
(i)  $\frac{18}{7} \cdot 7\frac{9}{18}$   
 $= 2\frac{4}{7} \cdot \frac{14}{4}$   
 $= 2\frac{4}{7} \cdot \frac{14}{4}$   
 $= 2\frac{4}{7} \cdot \frac{14}{4}$   
(j)  $\frac{21}{4} \cdot 4\frac{5}{211}$   
 $= 2\frac{4}{7} \cdot \frac{14}{4}$   
 $= 5\frac{1}{4} \cdot \frac{10}{1}$   
(k)  $\frac{37}{9} \cdot 9\frac{4}{371}$   
 $= 1\frac{1}{5} \cdot \frac{5}{1}$   
 $= 1\frac{1}{5} \cdot \frac{5}{1}$   
(n)  $\frac{12}{5} \cdot 5\frac{2}{121}$   
 $= 2\frac{2}{5} \cdot \frac{10}{2}$   
(o)  $\frac{37}{7} \cdot 7\frac{5}{377}$   
 $= 5\frac{2}{7} \cdot \frac{35}{2}$   
(p)  $\frac{40}{7} \cdot 7\frac{5}{401}$   
 $= 2\frac{2}{5} \cdot \frac{10}{2}$   
(o)  $\frac{37}{7} \cdot 7\frac{5}{377}$   
 $= 5\frac{2}{7} \cdot \frac{35}{2}$   
(p)  $\frac{40}{7} \cdot 7\frac{5}{401}$   
 $= 2\frac{5}{7} \cdot \frac{35}{5}$   
1. (a) <, (b) <, (c) >, (d) >, (e) <, (f) <, (g) Given fractions are  $\frac{5}{6}$  and  $\frac{7}{9}$   
Now,  $5 \times 9 = 45$  and  $6 \times 7 = 42$   
 $so \quad \frac{45 > 42}{5}$   
Now,  $5 \times 9 = 45$  and  $9 \times 13 = 117$   
 $126 > 117$   
 $so \quad \frac{7}{9} > \frac{13}{18}$   
Now,  $7 \times 18 = 126$  and  $9 \times 13 = 117$ 

(i) Given fraction are 
$$\frac{16}{19}$$
 and  $\frac{12}{57}$   
Cross multiply  $\frac{16}{19} - \frac{12}{57}$   
Now,  $16 \times 57 = 912$  and  $19 \times 12 = 228$   
so  $\boxed{\frac{16}{19} > \frac{12}{57}}$   
(j) Given fractions are  $\frac{2}{5}$  and  $\frac{4}{15}$   
Cross multiply:  $\frac{2}{5} - \frac{4}{15}$   
Now,  $2 \times 15 = 30$  and  $5 \times 4 = 20$   
 $\boxed{\frac{2}{5} > \frac{4}{15}}$   
(k) Given fractions are  $\frac{7}{16}$  and  $\frac{5}{8}$   
Cross multiply:  $\frac{7}{16} - \frac{5}{8}$   
Now,  $7 \times 8 = 56$  and  $5 \times 16 = 80$   
 $\boxed{\frac{7}{16} < \frac{5}{8}}$   
(l) Given fractions are  $\frac{8}{15}$  and  $\frac{6}{11}$   
Cross multiply:  $\frac{8}{15} - \frac{6}{11}$   
Now,  $8 \times 11 = 88$  and  $6 \times 15 = 90$   
 $\frac{88 < 90}{\frac{8}{15} < \frac{6}{11}}$   
Now,  $8 \times 11 = 88$  and  $6 \times 15 = 90$   
2. (a)  $\frac{10}{50}$   
HCF of 10 and  $50 = 10$   
Divide numerators and denominators by 10.  
So,  $\frac{10}{50} = \frac{10 \div 10}{50 \div 50} = \frac{1}{5}$   
Thus the simplest from of  $\frac{10}{50}$  is  $\frac{1}{5}$   
(b)  $\frac{16}{54}$  HCF of 16 and  $54 = 2$   
Divide numerators and denominators by 2.  
So,  $\frac{16}{54} = \frac{16 \div 2}{54 \div 2} = \frac{8}{27}$   
Thus the simplest from of  $\frac{16}{54}$  is  $\frac{8}{27}$ 

(c) 
$$\frac{35}{49}$$

HCF of 35 and 49 = 7

Divide numerators and denominators by 2.

So, 
$$\frac{35}{49} = \frac{35 \div 7}{49 \div 7} = \frac{5}{7}$$
  
Thus the simplest form of  $\frac{35}{49}$  is  $\frac{5}{7}$ 

(d)  $\frac{33}{64}$ 

HCF of 56 and 64 = 8

Divide numerators and denominators by 2.

So, 
$$\frac{56}{64} = \frac{56 \div 8}{64 \div 8} = \frac{7}{8}$$
  
Thus the simplest form of  $\frac{56}{64}$  is  $\frac{7}{8}$ 

(e) 
$$\frac{18}{81}$$

HCF of 18 and 81 = 9

Divide numerators and denominators by 9.

So, 
$$\frac{18}{81} = \frac{18 \div 9}{81 \div 9} = \frac{2}{9}$$
  
Thus the simplest form of  $\frac{18}{81}$  is  $\frac{2}{9}$ 

(f) 
$$\frac{27}{63}$$

HCF of 27 and 63 = 9

Divide numerators and denominators by 9. 27 - 27 + 0 = 2

So, 
$$\frac{27}{63} = \frac{27 \div 9}{63 \div 9} = \frac{3}{7}$$
  
Thus the simplest form of  $\frac{27}{63}$  is  $\frac{3}{7}$ 

(g) 
$$\frac{34}{68}$$

HCF of 34 and 68 = 34

Divide numerators and denominators by 34.

So, 
$$\frac{34}{68} = \frac{34 \div 34}{68 \div 34} = \frac{1}{2}$$
  
Thus the simplest form of  $\frac{34}{68}$  is  $\boxed{\frac{1}{2}}$ 

(h)  $\frac{105}{500}$ 

HCF of 105 and 500 = 5

Divide numerators and denominators by 5.

So, 
$$\frac{105}{500} = \frac{105 \div 5}{500 \div 5} = \frac{21}{100}$$
  
Thus the simplest form of  $\frac{105}{500}$  is  $\frac{21}{100}$ 

3.	(a)	$\frac{4}{9} \leq \frac{5}{9}, \text{ (b) } \frac{3}{5} \geq \frac{2}{5},$	(c)	$\frac{1}{4} \leq \frac{2}{4}, (d)  \frac{3}{8} \leq \frac{4}{8},$
4.	(a)	$\frac{2}{8}, \frac{3}{8}, \frac{6}{8}, \frac{7}{8}$	(b)	$\frac{3}{12}, \frac{6}{12}, \frac{9}{12}, \frac{13}{12}$
	(c)	$\frac{9}{8}, \frac{9}{6}, \frac{9}{5}, \frac{9}{2}$	(d)	$\frac{1}{14}, \frac{3}{14}, \frac{10}{14}, \frac{12}{14}$
5.	(a)	$\frac{7}{6}, \frac{4}{6}, \frac{2}{6}, \frac{1}{6}$	(b)	$\frac{10}{2}, \frac{10}{3}, \frac{10}{5}, \frac{10}{7}$
	(c)	$\frac{9}{2}, \frac{9}{5}, \frac{9}{6}, \frac{9}{8}$	(d)	$\frac{12}{14}, \frac{10}{14}, \frac{3}{14}, \frac{1}{14}$
		Exe	rcise	6.4
1.	(a)	$\frac{3}{7} + \frac{2}{7}$	(b)	$\frac{2}{15} + \frac{7}{15}$
		$=\frac{3+2}{7}=\frac{5}{7}$		$=\frac{2+7}{15}=\frac{9}{15}=\frac{3}{5}$
	(c)	$\frac{3}{13} + \frac{7}{13}$	(d)	$\frac{2}{6} + \frac{3}{6} + \frac{1}{6}$
		$=\frac{3+7}{13}=\frac{10}{13}$		$=\frac{2+3+1}{6}=\frac{6}{6}=1$
	(e)	$\frac{7}{10} + \frac{9}{10}$	(f)	$\frac{13}{15} + \frac{8}{15}$
		$=\frac{7+9}{10}=\frac{16}{10}=\frac{8}{5}$		$=\frac{13+8}{15}=\frac{21}{15}=\frac{7}{5}$
	(g)	$\frac{7}{25} + \frac{9}{25} + \frac{4}{25}$	(h)	$\frac{19}{70} + \frac{11}{70} + \frac{5}{70}$
		$=\frac{7+9+4}{25}=\frac{20}{25}=\frac{4}{25}$	4 5	$=\frac{19+11+5}{70}=\frac{35}{70}=\frac{1}{2}$
	(i)	$\frac{26}{100} + \frac{17}{100} + \frac{7}{100}$		
		$=\frac{26+17+7}{100}=\frac{50}{100}$	$=\frac{1}{2}$	
2.	(a)	$\frac{7}{9} - \frac{4}{9}$		$\frac{15}{26} - \frac{2}{26}$
		$=\frac{7-4}{9}=\frac{3}{9}=\frac{1}{3}$		$=\frac{15-2}{26}=\frac{13}{26}=\frac{1}{2}$
	(c)	$\frac{40}{41} - \frac{19}{41}$	(d)	$\frac{19}{75} - \frac{6}{75}$
		$=\frac{40-19}{41}=\frac{21}{41}$		$=\frac{19-6}{75}=\frac{13}{75}$

(c) 
$$6\frac{5}{18} - 4\frac{7}{18}$$
  
 $= \frac{(18 \times 6) + 5}{18} - \frac{(18 \times 4) + 7}{18} = \frac{113}{18} - \frac{79}{18} = \frac{17}{9}$   
(f)  $1\frac{4}{9} - \frac{5}{9}$   
 $= \frac{13}{9} - \frac{5}{9} = \frac{13 - 5}{9} = \frac{8}{9}$   
(g)  $\frac{7}{15} - \frac{2}{15}$  (h)  $1\frac{1}{5} - \frac{3}{5}$   
 $= \frac{7 - 2}{15} = \frac{5}{15} = \frac{1}{3}$   $= \frac{6}{5} - \frac{3}{5} = \frac{6 - 3}{5} = \frac{3}{5}$   
(i)  $\frac{33}{21} - \frac{27}{21}$   
 $\frac{33}{21} - \frac{27}{21} = \frac{33 - 27}{21} = \frac{6}{21} = \frac{2}{7}$   
3. (a)  $\frac{3}{5} + \frac{3}{4}$   
LCM of 5 and 4 = 20  
 $= \frac{3 \times 4 + 3 \times 5}{20} = \frac{12 + 15}{20} = \frac{27}{20} = 1\frac{7}{20}$   
(b)  $\frac{4}{9} + \frac{4}{18} + \frac{5}{36}$   
LCM of 9, 18 and 36 = 36  
 $= \frac{4 \times 4 + 4 \times 2 + 5 \times 1}{36} = \frac{16 + 8 + 5}{36} = \frac{29}{36}$   
(c)  $\frac{19}{16} + \frac{5}{8} + \frac{5}{24}$   
LCM of 16, 8 and 24 = 48  
 $= \frac{19 \times 3 + 5 \times 6 + 5 \times 2}{48} = \frac{57 + 30 + 10}{48} = \frac{97}{48} = 2\frac{1}{48}$   
(d)  $\frac{7}{1} + \frac{7}{5}$   
LCM of 1 and 5 = 5  
 $= \frac{7 \times 5 + 7 \times 1}{5} = \frac{35 + 7}{5} = \frac{42}{5} = 8\frac{2}{5}$   
(e)  $9 + 8\frac{1}{3} + \frac{2}{3}$   
LCM of 1, 3 and 3 = 3  
 $= \frac{9}{1} + \frac{25}{3} + \frac{2}{3} = \frac{9 \times 3 + 25 \times 1 + 2 \times 1}{3} = \frac{27 + 25 + 2}{3} = \frac{54}{3} = 18$ 

(f) 
$$2\frac{3}{7} + \frac{9}{8} + 5$$
  
LCM of 7, 8 and 1 = 56  
 $=\frac{17}{7} + \frac{9}{8} + \frac{5}{1} = \frac{17 \times 8 + 9 \times 7 + 5 \times 56}{56}$   
 $=\frac{136 + 63 + 280}{56} = \frac{479}{56}$   
(g)  $\frac{23}{40} - \frac{3}{8}$   
LCM of 40 and 8 = 40  
 $=\frac{23 \times 1 - 3 \times 5}{40} = \frac{23 - 15}{40} = \frac{8}{40} = \frac{1}{5}$   
(h)  $2\frac{4}{15} - \frac{7}{5}$   
LCM of 15 and 5 = 15  
 $=\frac{34}{15} - \frac{7}{5} = \frac{34 \times 1 - 7 \times 3}{15} = \frac{34 - 21}{15} = \frac{13}{15}$   
(i)  $3\frac{6}{7} - \frac{10}{21} - 1$   
LCM of 7, 21 and 1 = 21  
 $=\frac{27}{7} - \frac{10}{21} - \frac{1}{1} = \frac{3 \times 27 - 10 \times 1 - 1 \times 21}{21}$   
 $=\frac{81 - 10 - 21}{21} = \frac{50}{21} = 2\frac{8}{21}$   
(a)  $2\frac{4}{9} - 2 + \frac{11}{18}$   
LCM of 9, 1 and 18 = 18  
 $=\frac{22}{9} - \frac{2}{1} + \frac{11}{18} = \frac{19}{18} = 1\frac{1}{18}$   
(b)  $8\frac{5}{12} - 2\frac{5}{6} - 1\frac{7}{15}$   
LCM of 12,6 and 15 is 60  
 $=\frac{101}{12} - \frac{17}{6} - \frac{22}{15} = \frac{101 \times 5 - 17 \times 10 - 22 \times 4}{60}$   
 $=\frac{505 - 170 - 88}{60} = \frac{247}{60} = 4\frac{7}{60}$   
(c)  $3\frac{5}{8} + 2\frac{4}{9} - 2\frac{5}{12} = \frac{29}{8} + \frac{22}{9} - \frac{29}{12}$   
 $=\frac{29 \times 9 + 22 \times 8 - 29 \times 6}{72} = \frac{261 + 176 - 174}{72}$ 

99

4.

5. (a) Petrol used in 2 days = 
$$4\frac{2}{3}l + 5\frac{7}{8}l$$
  
LCM of 3 and 8 is  $24 = \frac{14}{3} + \frac{47}{8}$   
 $= \frac{14 \times 8 + 47 \times 3}{24} = \frac{112 + 141}{24} = \frac{253}{24} = 10\frac{13}{24}$   
 $= 10\frac{13}{24}$   
Thus,  $10\frac{13}{24}$  litre of petrol was used in 2 days

(b) Total Petrol = 12 litre

Petrol used =  $10 \frac{13}{24}$  litre Petrol was left =  $12 - 10 \frac{13}{24}$  litre =  $12 - \frac{253}{24} = \frac{24 \times 12 - 253}{24} = \frac{35}{24}$ Thus  $\frac{35}{24}$  litre of petrol was left.

6. Total material used

$$= 2\frac{1}{4} + 1\frac{1}{2} + 2\frac{1}{2} \qquad = \frac{9}{4} + \frac{3}{2} + \frac{5}{2}$$
$$= \frac{9+6+10}{4} = \frac{25}{4} \text{ m}$$

Material left 
$$10 - \frac{25}{4} = \frac{10 \times 4 - 25}{4}$$
  
=  $\frac{15}{4} = 3\frac{3}{4}$  m

Thus 
$$3\frac{3}{4}m$$
 material is left unstitched  
7. Money spend =  $\mathbb{R}85\frac{1}{2}$ 

Total Money = 
$$\frac{(85 \times 2) + 1}{2} + \frac{(34 \times 2) + 1}{2}$$
  
Total Money =  $\frac{170 + 1}{2} + \frac{68 + 1}{1} = \frac{171 + 69}{2}$   
Thus he have `120 in the beginning

1. Man walks in 1 hour  $=5\frac{2}{3}$  km He will walk in 6 hours  $=5\frac{2}{3} \times 6$  km  $=\frac{17}{3} \times 6$  km  $=\frac{17 \times \cancel{3}^2}{\cancel{3}}$  km

Thus man walks 34 km in 6 hour.

2. Earning of labour in 1 day =  $120\frac{2}{7}$ Earning of labour in 21 days =  $120\frac{2}{7} \times 21$ 

$$= \frac{842}{7} \times 21 \quad \frac{842 \times 21}{7}$$

=`2526Ans

Thus earning of labour of 21 days is 2526

3. Total persons were invited to attend the party = 100 Number of male members =  $\frac{11}{20}$  of total person

$$= \frac{11}{20} \times 100^5$$

Number of male members = 55

Number of female member = Total person - male member

$$=100-55$$

=45

Number of female members = 45

4. Cloth required to stitch a curtain  $= 2\frac{1}{4}$  m Lady buys cloth = 18 m

No of curtains that will be stitched = 
$$18 \div 2\frac{1}{4}$$
  
=  $18 \div \frac{9}{4}$  =  $18 \div \frac{9}{4} \times \frac{4}{9}$ 

= 8 curtains **Ans** 

So, 8 curtains will be stitched in 18 m of cloth

5. Container contains  $= 6\frac{3}{4}l$  milk Capacity of bottles  $= \frac{3}{4}l$ No of bottles that will be filled.  $= 6\frac{3}{4}l \div \frac{3}{4}l$ 

$$=\frac{27}{4}\div\frac{3}{4} = \frac{27}{\cancel{4}}\times\frac{\cancel{4}}{3}$$

= 9 bottles **Ans** 

Revision

**Do Yourself** 

Exercise 6.6  
1. (a) 
$$\frac{2}{7} \times 8$$
 (b)  $\frac{16}{21} \times 9$   
 $= \frac{2 \times 8}{7} = \frac{16}{7} = \frac{16 \times 9}{21} = \frac{144}{21} = \frac{48}{7}$ 

(c) 
$$\frac{7}{16} \times 12$$
 (d)  $7\frac{2}{3} \times 18$   
 $=\frac{12 \times 7}{16} = \frac{84}{16} = \frac{21}{4}$   $=\frac{23 \times 18}{3} = 138$   
(e)  $14\frac{2}{7} \times 21$  (f)  $\frac{5}{6} \times 14$   
 $=\frac{100 \times 21}{7} = 300$   $=\frac{70}{6} = \frac{35}{3}$   
(g)  $\frac{2}{3} \times \frac{4}{5}$  (h)  $\frac{5}{6} \times \frac{8}{9}$   
 $=\frac{8}{15}$   $=\frac{40}{54} = \frac{20}{27}$   
(i)  $\frac{4}{3} \times \frac{2}{3}$  (j)  $\frac{7}{9} \times \frac{9}{7}$   
 $=\frac{8}{9}$   $=\frac{7 \times 9}{9 \times 7} = \frac{63}{63} = 1$   
(k)  $33\frac{1}{3} \times \frac{1}{10}$   $=\frac{100 \times 1}{30} = \frac{10}{3}$   
(l)  $11\frac{1}{9} \times 7\frac{1}{5}$   
 $=\frac{100 \times 36}{9} = \frac{200 \times 36}{9 \times 5} = 80$   
(m)  $9\frac{2}{9} \times 4\frac{1}{2}$   $=\frac{83 \times 9}{9 \times 2} = \frac{83}{2}$   
(n)  $\frac{7}{8} \times \frac{6}{7} \times \frac{15}{32}$   $=\frac{7 \times 6 \times 15}{8 \times 7 \times 32} = \frac{90}{256} = \frac{45}{128}$   
(o)  $\frac{13}{18} \times \frac{9}{11} \times \frac{2}{13}$   $=\frac{18}{18 \times 11} = \frac{1}{11}$   
(p)  $11\frac{1}{5} \times 4\frac{2}{7}$   $=\frac{56 \times 6}{7} = 48$ 

/101/

2.

3.

(h) 
$$3\frac{2}{15} \div 1\frac{2}{15} = \frac{47}{15} \div \frac{17}{15} = \frac{47}{15} \times \frac{15}{17} = \frac{47}{17} \times \frac{15}{17} = \frac{47}{17}$$
 Ans

(i) 
$$18\frac{3}{4} \div 1\frac{7}{8} = \frac{75}{4} \div \frac{15}{8} = \frac{75^5}{4} \times \frac{\cancel{8}^2}{\cancel{15}} = 10$$
 Ans

(j) 
$$18\frac{1}{2} \div \frac{3}{4} = \frac{37}{2} \div \frac{3}{4} = \frac{37}{2} \times \frac{4^2}{3} = \frac{74}{3}$$
 Ans

4. (a)  $\frac{7}{10}$  to 210 (b)  $\frac{2}{9}$  to 99  $=\frac{7}{10} \times 210^{21} = 147$   $=\frac{2}{9} \times 99^{21} = 22$ 

(c) 
$$\frac{6}{13}$$
 to 143  
 $=\frac{6}{13} \times 143^{11} = 66$ 
(d)  $\frac{3}{5}$  to 240  
 $=\frac{3}{5} \times 240^{48} = 144$ 

(e) 
$$\frac{3}{5}$$
 to `195.15 (f)  $\frac{2}{7}$  of 490 m  
=  $\frac{3}{5'} \times 195.15$  = `117.09 =  $\frac{2}{7'} \times 490'_{70}$  = 140 m

(g) 
$$\frac{6}{9}$$
 of 8 km 100 m  $=\frac{6}{9} \times 8^{0.9} = 5.4 = 5$  km 400 m

(h) 
$$\frac{7}{8}$$
 of 560 ml (i)  $\frac{11}{12}$  of 480 g

$$=\frac{1}{8} \times 560 = 490 \, ml$$
  $=\frac{1}{12} \times 480 = 440 \, g$ 

0

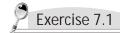
(j) 
$$\frac{9}{13}$$
 of 11*l* 700 *ml* g (k)  $\frac{9}{14}$  of 9 kg 828 g

$$= \frac{9}{13} \times 10.9 = 8.1 = \frac{9}{14} \times 9.828 = 9 \times 0.702 = 8 \ l \ 100 \ ml = 6 \ sg \ 318 \ g$$

(l) 
$$\frac{1}{4}$$
 of 800 g  $=\frac{1}{\cancel{4}} \times 800^{\circ} = 200$  g

5. (a) 
$$4 - \frac{2}{3} \times \frac{3}{4}$$
 (b)  $18\frac{1}{2} \times 3\frac{1}{2} \times 0$   
 $= 4 - \frac{2 \times 3}{3 \times 4} = 4 - \frac{1}{2}$   $= \frac{37}{2} \times \frac{7}{2} \times 0$   
 $= \frac{4 \times 2 - 1}{2} = \frac{7}{2} \text{ Ans}$   $= \frac{37 \times 7 \times 0}{2 \times 2} = 0 \text{ Ans}$   
(c)  $3\frac{3}{4} \times \frac{4}{5} + 2$   
 $= \frac{15}{4} \times \frac{4}{5} + 2 = \frac{^{3}15 \times 4}{4 \times 5} + 2 = 5 \text{ Ans}$ 

(b) 
$$2\frac{1}{2} \times 3\frac{1}{3} + 4\frac{1}{5} = \frac{4}{5} \times \frac{10}{3} + \frac{21}{5} = \frac{4 \times 10}{5} \times \frac{21}{5} = \frac{4 \times 10}{5} + \frac{21}{5} = \frac{8}{3} + \frac{21}{5} = \frac{8 \times 5 + 21 \times 3}{15} = \frac{40 + 63}{15} = \frac{103}{15}$$



1. Put the decimals in the numbers given in the table :

	Hundreds	Tens	Ones	Tenths	Hundredths	Thousandths
(a)		1	2	5	7	3
(b)	2	0	4	3	2	5
(c)			3	2	4	6
(d)	7	8	5	4	6	0
(e)				3	7	5

### 2. Write the following in words :

- (a) 2.643 = Two point six four three
- (b) 13.532 = Thirteen point five three two
- (c) 8.642 = Eight point six four two
- (d) 128.503 = One hundred twenty-eight point five zero three
- (e) 56.372 = Fifty-six point three seven two
- (f) 0.760 = Zero point seven six zero
- (g) 376.152 = Three hundred seventy-six point one five two
- (h) 5.008 = Five point zero zero eight

### 3. Write the following in figures :

(a) 4.06	(b) 0.329	(c) 41.524
(d) 600.49	(e) 12.08	(f) .0008
(g) 0.426	(h) 45.0007	

4. Write each of the following as decimals :

(a) 
$$72 + \frac{2}{10} + \frac{7}{100} = 72.27$$
  
(b)  $43 + \frac{1}{10} + \frac{2}{1000} = 43.102$   
(c)  $30 + \frac{3}{10} + \frac{8}{100} + \frac{5}{1000} = 30.385$   
(d)  $\frac{4}{100} + \frac{5}{100} = 0.045$   
(e)  $650 + \frac{2}{10} + \frac{5}{100} = 650.25$   
(f)  $100 + \frac{1}{10} + \frac{2}{100} = 100.12$   
(g)  $8 + \frac{8}{10} + \frac{8}{100} + \frac{8}{1000} = 8.888$   
(h)  $\frac{7}{100} + \frac{6}{1000} = 0.076$ 

### 1. Write the following as decimals :

- (b)  $\frac{21}{10} = 2.1$ (a)  $\frac{3}{10} = 0.3$ (c)  $\frac{131}{10} = 13.1$ (d)  $\frac{45}{10} = 4.5$ (f)  $\frac{42}{100} = 0.42$ (e)  $\frac{6}{100} = 0.06$ (g)  $\frac{412}{100} = 4.12$ (h)  $\frac{500}{100} = 5.00$ (i)  $\frac{8645}{1000} = 8.645$ (j)  $\frac{426}{1000} = 0.426$ (k)  $\frac{27}{1000} = 0.027$ (l)  $\frac{9184}{1000} = 9.184$ (m)  $\frac{7}{1000} = 0.007$ (n)  $\frac{6}{100} = 0.06$ (p)  $\frac{8453}{100} = 84.53$ (o)  $\frac{.973}{.10} = 97.3$ 2. Write the following as fractions : (a)  $0.6 = \frac{6}{10}$ (b)  $0.8 = \frac{8}{10}$ (d)  $3.9 = \frac{39}{10}$ (c)  $1.7 = \frac{17}{10}$ (f)  $28.43 = \frac{2843}{100}$ (e)  $2.14 = \frac{214}{100}$ (g)  $0.83 = \frac{83}{100}$ (h)  $0.03 = \frac{3}{100}$ (i)  $2.15 = \frac{215}{100}$ (j)  $12.38 = \frac{1238}{100}$ (k)  $0.612 = \frac{612}{1000}$ (*l*)  $2.875 = \frac{2875}{1000}$ (m)  $10.532 = \frac{10532}{1000}$ (n)  $4.67 = \frac{467}{100}$ (p)  $10.250 = \frac{10250}{1000}$ (o) 9.312 = 9312
  - 1000 1000
- Convert all the decimals in a group into like decimals : 3. (a) 3.72, 6.1, 152.923 = 3.720, 6.100, 152.923
  - (b) 2.93, 70.8, 3.274 = 2.930, 70.800, 3.274
  - (c) 7.8, 3.99, 1.242 = 7.800, 3.990, 1.242
  - (d) 16.67, 18.36, 2.007 = 16.670, 18.360, 2.007
  - (e) 35.6, 2.91, 3.46 = 35.60, 2.91, 3.46
  - (f) 2.6, 6.5109, 676.0 = 2.6000, 6.5109, 676.0000
- Which of these groups of decimals are like: 4. Decimals of groups (a), (c) and (e) are like decimals.

- Exercise 7.3
- 1. Write the following decimals in expanded form :

(a) 
$$2.5 = 2 + \frac{5}{10} = 2 + 0.5$$
  
(b)  $3.61 = 3 + \frac{6}{10} + \frac{1}{100} = 3 + 0.6 + 0.01$   
(c)  $17.284 = 10 + 7 + \frac{2}{10} + \frac{8}{100} + \frac{4}{1000} = 10 + 7 + 0.2 + 0.08 + 0.004$   
(d)  $235.642 = 200 + 30 + 5 + \frac{6}{10} + \frac{4}{100} + \frac{2}{1000} = 200 + 30 + 5 + 0.6 + 0.04 + 0.002$   
(e)  $17.8 = 10 + 7 + \frac{8}{10} = 10 + 7 + 0.8$   
(f)  $13.03 = 10 + 3 + \frac{3}{100} = 10 + 3 + 0.03$   
(g)  $717.005 = 700 + 10 + 7 + \frac{5}{1000} = 700 + 10 + 7 + 0.035$   
(h)  $8.732 = 8 + \frac{7}{10} + \frac{3}{100} + \frac{2}{1000} = 8 + 0.7 + 0.03 + 0.002$   
(i)  $7.07 = 7 + \frac{7}{100} = 7 + 0.07$   
(j)  $13.134 = 10 + 3 + \frac{1}{10} + \frac{3}{100} + \frac{4}{1000} = 10 + 3 + 0.1 + 0.03 + 0.004$   
(k)  $2.005 = 2 + \frac{5}{1000} = 2 + 0.005$   
(l)  $31.73 = 30 + 1 + \frac{7}{10} + \frac{3}{100} = 30 + 1 + 0.7 + 0.03$   
(m)  $670.403 = 600 + 70 + \frac{4}{10} + \frac{3}{1000} = 600 + 70 + 0.4 + 0.033$   
(m)  $9.005 = 9 + \frac{5}{1000} = 9 + 0.005$   
(o)  $0.43 = \frac{4}{10} + \frac{3}{100} = 0.4 + 0.03$   
(p)  $0.002 = \frac{2}{1000} = 0.002$   
Write the decimals for the following expanded form :  
(a)  $50 + 5 + \frac{5}{10} + \frac{5}{100} + \frac{5}{1000} = 50 + 5 + 0.5 + 0.05 + 0.005$ 

- (c)  $70 + 6 + \frac{6}{100} + \frac{7}{1000} = 70 + 6 + 0.06 + 0.007 = 76.067$
- (d)  $90 + 9 + \frac{9}{10} + \frac{9}{100} + \frac{9}{1000} = 90 + 9 + 0.9 + 0.09 + 0.009$ 00 000

(e) 
$$100 + 2 + \frac{2}{1000} = 100 + 2 + 0.002 = 102.002$$

2.



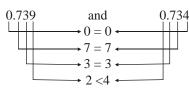
(f) 
$$7 + \frac{7}{10} + \frac{2}{100} = 7 + 0.7 + 0.02 = 7.72$$
  
(g)  $60 + 6 + \frac{4}{10} + \frac{5}{100} + \frac{7}{1000} = 60 + 6 + 0.4 + 0.05$   
 $+ 0.007 = 66.457$   
(h)  $700 + 80 + 5 + \frac{2}{100} + \frac{3}{1000} = 700 + 80 + 5 + 0.02$ 

+0.003 = 785.023

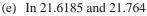
Exercise 7.4

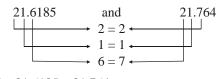
### 1. Compare the following decimals:

- (a) In 1.73 and 2.84, comparing the whole number part, we have 1 < 2 So, 1.73 < 2.84</li>
- (b) In 6.432 and 5.734, comparing the whole number part, we have 6 > 5 So, 6.432 > 5.734
- (c) In 32.3 and 13.05, comparing the whole number part, we have 32 > 13
   So, 32.3 > 13.05
- (d) In 0.732 and 0.734

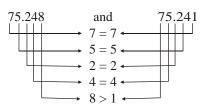


So, 0.732 < 0.734



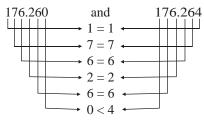


So, 21.6185 < 21.764 (f) In 75.248 and 75.241



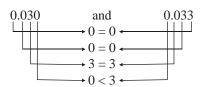
So, 75.248 > 75.241

(g) In 176.260 and 176.264



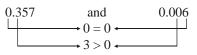
So, 176.260 < 176.264

(h) In 0.030 and 0.033



So, 
$$0.03 < 0.033$$

(i) In 0.357 and 0.006



### So, 0.357 > 0.006

- 2. Write the following decimals in the ascending order: Comparing the decimals the required ascending order is:
  - (a) 1.312 < 2.542 < 7.312 < 8.501
  - (b) 0.6 < 0.76 < 1.74 < 2
  - (c) 2.14 < 3.68 < 4.27 < 5.66
  - (d) 0.63 < 7.241 < 8.325 < 19.621
  - (e) 3.678 < 3.768 < 3.867 < 3.876
  - $(f) \quad 8.384 < 8.83 < 8.843 < 9.87 \\$
- **3.** Write the following decimals in the descending order: The required descending order is:
  - (a) 41.101 > 41.001 > 40.101 > 40.011
  - (b) 444.42 > 44.41 > 4.442 > 4.44
  - (c) 0.342 > 0.032 > 0.023 > 0.0032
  - (d) 13.5 > 8.464 > 7.5 > 2.73
  - (e) 6.1 > 2.16 > 1.62 > 1.6
  - $(f) \quad 21.163 > 18.338 > 13.16 > 11.51 \\$

### 1. Find the sum :

1.	i mu me sum .				
	(a) 0.4	(b)	7.28	(c)	19.35
	+ 0. 6		+ 6.48		+ 1 8.64
	1.0		13.76		37.99
	(d) 0.008	(e)	13.73	(f)	5.7
	+7.246		2.4		3.86
	7.254		+ 6.324		+14.54
			22.454		19.10
	(g) 89.310	(h)	6.070		
	3.024		2.532		
	+156.800		+0.100		
	249.134		8.702		
2.	Subtract :				
	(a) 0.62	(b)	15.3	(c)	1.05
	<u>-0.42</u>		<u>-6.4</u>		-0.437
	0.20		8.9		0.613

(d)	2 6. 0 8 <u>- 1 8. 3 6</u>	` ´	1.00 -0.973	(f)	2 4 0. 3 <u>- 8 7. 6 4</u>
(g)	<u>7.72</u> 376.50	-	0.027 214.8		<u>152.66</u>

-24.89	-16.72
351.61	198.08

### 3. Add the following decimals:

[Hint: Change the decimals into like decimals and write them in columns.]

(a)	3.50 16.48 +24.60 44.58	(b)	$5.23 \\ 1.72 \\ + 6.10 \\ 13.05$	(c)	$ \begin{array}{r} 1 & 6 & 2 & 0 & 0 \\ 2 & 6 & 4 & 8 & 0 \\                                  $
(d)	53.45014.678+28.39096.518	(e)	2 4.6002 5.500+ 0.76450.864	(f)	$   \begin{array}{r} 1 \ 3 \ 2 \ 5. \ 1 \ 6 \\       1 \ 6 \ 2. \ 2 \ 4 \\       + \ 1 \ 8 \ 8. \ 2 \ 7 \\       \hline       1 \ 6 \ 7 \ 5.6 \ 7 \\   \end{array} $
(g)	77.503.66+ 1.858301	(h)	8.2603.240+0.32411.824		

### 4. Find the difference

[Hint: Change the decimals into like decimals and write them in columns.]

(a)	$1\ 0\ 0.\ 0\ 0$	(b)	214.30	(c)	3 3. 7 5
	- 7 8.64		-210.84		-12.80
	21.36		3.46		20.95
(d)	375.00	(e)	1000.00	(f)	360.500
	-198.96		- 246.47		-195.489
	176.04		753.53		165.011
(g)	10.00	(h)	240.340		
	- 6.84		- 3 0. 6 4 2		
	3.16		209.698		
			F	1	
		Ľ	Exercise 7.0	5	

### Solve the following problems:

1.	The sum of two numbers	= 25.64
	One of the numbers	= -16.28
	The other number	= 9.36

So, the other number is 9.36.

2. Ram has = `410.50 Shyam has = `-316.25Difference = `94.25

Thus, Ram has Rs 94.25 much more.

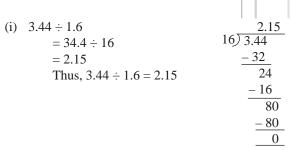
3. The cost of the pair of leather shoes = 725.85The cost of the pair of sports shoes Difference = 175.075= 175.10

Therefore, the pair of leather shoes costs more and by ` 175.10.

4.	The length of Sushil's journe, Sushil has been covered from The distance left to be covered	h it $= -1425.84$ k	m
5.	So, 399.16 km is still left to b Rahul bought the wheat = Titoo bought the wheat = Lavi bought the wheat = The total amount of wheat =	1.50 kg 7.25 kg +18.00 kg	
6.	The total amount of wheat b is 26.75 kg. Govind walked on Sunday He walked on Monday He walked on Tuesday Total distance Govind walked	= 8.20  km = 7.80 km = + 4.67 km	l altogether
7.	The distance walked by Gov 20.67 km. The milkman supplies milk to He supplies milk to the other Total amount of milk he supp The milkman carries milk The amount of milk he suppl The amount of milk left with	o one customer = customer = plies = ies =	
8.	So, 0.55 <i>l</i> of milk will be left Komal got as pocket money Her brother got as pocket mo Difference Thus, Komal got ` 7.75 much	= oney <u>=</u>	
	Exerci	se 7.7	
1.	Find the product: (a) $4.8 \times 6$ 48 $\times 6$ 288	(b) 3.5 × 7	$35 \\ \times 7 \\ \hline 245$
	Thus, $4.8 \times 6 = 28.8$	Thus, $3.5 \times$	7 = 24.5
	(c) $2.7 \times 8$ 27 $\times 8$ 216	(d) 14.5 × 1.2	$     \begin{array}{r}       145 \\       \times 12 \\       \overline{290} \\       1450 \\       \overline{1740}     \end{array} $
	Thus, $2.7 \times 8 = 21.6$	Thus, $14.5 \times 1.2$	2 = 17.40
	(e) $31.7 \times 4.5$ $317$ $\times 45$ 1585 12680 14265	(f) 165.2 × 1.3	$   \begin{array}{r}     1652 \\     \times 13 \\     \overline{4956} \\     16520 \\     21476   \end{array} $
Thu	$133, 31.7 \times 4.5 = 142.65$	hus, $165.2 \times 1.3 =$	214.76
	(g) $3.65 \times 24.4 \qquad \begin{array}{r} 365 \\ \times 244 \\ \hline 1460 \\ 14600 \\ + 73000 \\ \hline 89060 \end{array}$	(h) 76.3 × 2.8	$     \begin{array}{r}       763 \\       \times 28 \\       \overline{6104} \\       \underline{15260} \\       21364     \end{array} $

Thus, $3.65 \times 24.4 = 89.060$ Thus, $76.3 \times 2.8 = 213.64$		
Thus, $5.05 \times 24.4 = 67.000$ Thus, $70.5 \times 2.6 = 215.04$	P Exerci	se 7 8
(i) $93.4 \times 1.53$ 934 (j) $286.3 \times 1.02$ 2863		
× 153 × 102		
2802 5726	1. Divide : (a) $16.8 \pm 4$	(b) $255 \cdot 5$
46700 00000	(a) $16.8 \div 4$	(b) $25.5 \div 5$
$\frac{+93400}{142902} + \frac{286300}{292026}$	4) 16.8	$5) \frac{5.1}{25.5}$
142902 292026	- 16	- 25
Thus, $93.4 \times 1.53 = 142.902$ Thus, $286.3 \times 1.02 = 292.026$	08	$\frac{-25}{05}$ $\frac{-5}{0}$
(k) $3.278 \times 1.08$ $_{3278}$ (l) $789.2 \times 3.5$ 7892	$\frac{-8}{0}$	$\frac{3}{0}$
× 108 × 35		
26224 39460	Thus, $16.8 \div 4 = 4.2$	Thus, $25.5 \div 5 = 5.1$
$\begin{array}{r} 00000 \\ + 327800 \end{array} \qquad \qquad \begin{array}{r} + 236760 \\ \hline 276220 \end{array}$	(c) 173.4 ÷ 17	(d) $8.32 \div 26$
+327800	10.2	0.32
	$17)\frac{10.2}{173.4}$	$26\overline{\smash{\big)}\overline{8.32}}$
Thus, $3.278 \times 1.08 = 3.54024$ Thus, $789.2 \times 3.5 = 2762.20$	- 17	$\frac{-75}{52}$
$(r_{1})$ $(7 + 24)$ $(r_{1})$ $(12 + 214)$	034	52
(m) $6.7 \times 2.4_{67}$ (n) $9.13 \times 2.14_{913}$		$\frac{-52}{0}$
$\frac{\times 24}{268} \qquad \qquad \frac{\times 214}{3652}$	0	
+ 1340 9130	Thus, $172.4 \pm 17$ , $10.2$	Thurs 8 22 · 26 0 22
1608 + 182600	Thus, $173.4 \div 17 = 10.2$	Thus, $8.32 \div 26 = 0.32$
195382	(e) $34.3 \div 35$	(f) $75.15 \div 45$
	<u>00.98</u> 35) <u>34.30</u>	45) 1.67 45) 75.15
Thus, $6.7 \times 2.4 = 16.08$ Thus, $9.13 \times 2.14 = 19.5382$	- 315	_ 45_
(o) 567.2 × 4.03	280	301
5672	-280	-270
$\frac{\times 403}{17016}$	0	315
00000		$\frac{-315}{0}$
+2268800		
2285.816	Thus, $34.3 \div 35 = 0.98$	Thus, $75.15 \div 45 = 1.67$
Thus, 567.2 × 4.03 = 2285.816	(g) $1842.48 \div 18$	(h) $505.84 \div 8$
2. Multiply the following :	$\frac{102.36}{18)1842.48}$	<u>63.23</u> 8) 505.84
(a) $4.2 \times 10 = 42$	- 18	-48
(b) $5.31 \times 10 = 53.1$	042	25
(c) $0.4 \times 10 = 4$	$\frac{-36}{64}$	$\frac{-24}{18}$
(d) $6.142 \times 100 = 614.2$	<u> </u>	
(e) $7.32 \times 100 = 732$	108	$\frac{-16}{24}$
(f) $0.32 \times 100 = 32$	- 108	<u>-24</u>
	0_	0
(g) $5.314 \times 1000 = 5314$ (b) $6.7 \times 1000 = 6700$	Thus, $1842.48 \div 18 = 102.36$	Thus, $505.84 \div 8 = 63.23$
(h) $6.7 \times 1000 = 6700$	$1103, 1072.70 \cdot 10 - 102.50$	inus, 505.0+ . 0 = 05.25
(i) $8.32 \times 1000 = 8320$	(i) 283.2÷12	
(j) $9.2 \times 10 = 92$	$12) \frac{23.6}{283.2}$	
(k) $0.003 \times 1000 = 3$		
(1) $8.2 \times 1000 = 8200$	$\frac{-24}{43}$	
(m) $7.6 \times 100 = 760$	$\frac{-36}{72}$	
(n) $5.324 \times 1000 = 5324$		
(o) $17.42 \times 100 = 1742$	$\frac{-72}{0}$	
		Thus, $283.2 \div 12 = 23.6$

2.	Per	form the following divisions :	
	(a)	16 00	$\frac{1.4}{2.4}$
		$= 22.4 \div 16$ 16) 22 = 1.4 $-16$	
			$\frac{64}{0}$
		_	00.9
	(b)	= /8.3 - 8/	78.3 78.3 0
	(c)	$\begin{array}{r} 0.408 \div 0.17 \\ = 40.8 \div 17 \\ = 2.4 \end{array} $ 17)	2.4 40.8 - 34
		Thus, $0.408 \div 0.17 = 2.4$	
	(d)	$= 0250 \div 25$ = 250	$5) \frac{250}{6250} \frac{-50}{125}$
		Thus, $6.25 \div 0.025 = 250$	$\frac{-125}{00}$
	(e)	0.213 ÷ 0.3 300	000.71 0) 213.00
		$= 213 \div 300$ = 0.71	$\frac{-2100}{300}$
		Thus, $0.213 \div 0.3 = 0.71$	$\frac{-300}{0}$
	(f)	$76.363 \div 0.07 = 7636.3 \div 7$	1090.9 7) 7636.3
		= 1090.9	$\frac{-7}{063}$
		Thus, $76.363 \div 0.07 = 1090.9$	$\frac{-63}{063}$
			$\frac{-63}{0}$
	(g)	0.0318 ÷ 0.12	$\frac{0.265}{12)\ 003.18}$
		$= 3.18 \div 12$ = 0.265	$-\frac{24}{78}$
		Thus, $0.0318 \div 0.12 = 0.265$	$\frac{-72}{60}$
			$\frac{-60}{0}$
	(h)	$15.525 \div 0.115 \\ = 15525 \div 115$	$\frac{135}{115) 15525}$
		= 135 Thus, 15.525 ÷ 0.115 = 135	- 115
		,	402 - 345
			575 - 575
			0



	1.0836
() 0.4001 0.05	225) 243.8100
(j) $2.4381 \div 2.25$	- 225
$= 243.81 \div 225$	1881
= 1.0836	- 1800
Thus, $2.4381 \div 2.25 = 1$	.0836 810
10	$\frac{29.65}{1350}$
10	- 1350
	-32 $-1350$
	154
(k) $4.744 \div 0.16$	- 144
$=474.4 \div 16$	104
= 29.65	- 96
Thus, $4.744 \div 0.16 = 29.65$	80
,	- 80
	0

	0.036
( <i>l</i> ) $0.0864 \div 2.4$	24) 0.864
$= 0.864 \div 24$	- 72
= 0.036	144
Thus, $0.0864 \div 2.4 = 0.036$	- 144
	0

3. Find the quotient:

r mu me quotient.		
(a)	$7.25 \div 10 = 0.725$	
(b)	$8.6 \div 10 = 0.86$	
(c)	$0.3 \div 10 = 0.03$	
(d)	$2.4 \div 100 = 0.024$	
(e)	$28.97 \div 100 = 0.2897$	
(f)	$7.1285 \div 100 = 0.071285$	
(g)	$2.8 \div 1000 = 0.0028$	
(h)	$17.23 \div 1000 = 0.01723$	
(i)	$215.2 \div 100 = 2.152$	
	Exercise 7.9	
lve the following problems:		

Solve the following problems:			
1.	The cost of 1 fancy cap		44.50
	So, the cost of 12 fancy ca	ıp =	(44.50 × 12)
	$ \begin{array}{r}     44.50 \\     \times 12 \\     \overline{8900} \\     + 44500 \\     \overline{534.00} \end{array} $	Thus, t	534.00 he cost of 12 fancy 534.00.



2.	The cost of 22.5 kg of apples	=`243.81
	So, the cost of 1 kg of apples	=`(243.81 ÷ 22.5)
	10.836	=`(2438.1 ÷ 225)
	225)2438.100	= 10.836 or 10.84
	-225 Thus, the cost	t of 1 kg of apple is ` 10.84.
	1881	
	-1800	
	810	
	_ 675_	
	1350	
	- 1350	
	0	2.965
3.	The area of a rectangle $=$ length	
	Or, $L \times B = A$	- 32

Or,  $L \times B = A$ So,  $L \times 1.6$  cm = 4.744 sq cm  $L = (4.744 \div 1.6)$  cm  $= (47.44 \div 16)$  cm = 2.965 cm  $\frac{-32}{154}$   $\frac{-144}{104}$   $\frac{-96}{80}$ 0

Thus, the length of the rectangle is 2.965 cm.

=`20.05

4. The cost of 15 kg of mangoes = 300.75So, the cost of 1 kg of mangoes =  $300.75 \div 15$ 

Thus the cost of 1 kg apples is  $\geq$  20.05.

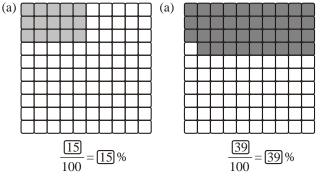
5. The cost of 1 m cloth = 48.50

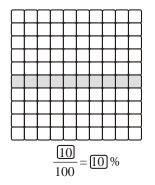
So, the cost of 12.75 m o	$f \text{ cloth} = (48.50 \times 12.75)$	
48.50	=`618.3750	
× 12.75	=`618.38	
24250		
339500		
970000		
+4850000		
618.3750		
Thus, the east of 12.75 m of sloth is $(619.29)$		

Thus, the cost of 12.75 m of cloth is ` 618.38



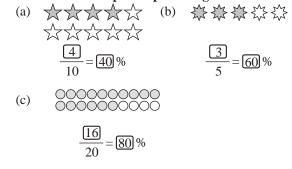
1. What percentage of the square is shaded :





### 2. Write the shaded part as percentage :

(c)



3. Write the following fractions as percentage :

(a) 
$$\frac{3}{5} = \frac{3}{5} \times \frac{100^{20}}{100} = \frac{3}{5} \times \frac{1}{100} = 60\%$$

(b) 
$$\frac{4}{10} = \frac{4}{10} \times \frac{100^{10}}{100} = 40 \times \frac{1}{100} = 40\%$$

(c) 
$$\frac{1}{2} = \frac{1}{2'_1} \times \frac{100^{50}}{100} = 50 \times \frac{1}{100} = 50\%$$

(d) 
$$\frac{1}{4} = \frac{1}{\mathcal{H}_1} \times \frac{100^{25}}{100} = 25 \times \frac{1}{100} = 25\%$$

### 4. Write the following percentages as fractions :

- (a)  $45\% = \frac{45^9}{10\theta_{20}} = \frac{9}{20}$ (b)  $60\% = \frac{60^3}{10\theta_5} = \frac{3}{5}$ (c)  $35\% = \frac{35^7}{10\theta_{20}} = \frac{7}{20}$ (d)  $85\% = \frac{85^{17}}{10\theta_{20}} = \frac{17}{20}$
- 5. Write the following decimal fractions as percentages :
  - (a) .85 =  $\frac{85}{100}$  = 85 ×  $\frac{1}{100}$  = 85%

(b) 
$$.32 = \frac{32}{100} = 32 \times \frac{1}{100} = 32\%$$

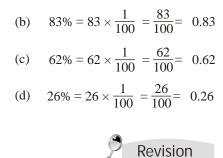
(c) 
$$.43 = \frac{43}{100} = 43 \times \frac{1}{100} = 43\%$$

(d) 
$$.058 = \frac{58}{1000} = \frac{58}{10 \times 100} = \frac{58}{10} \times \frac{1}{100} = 5.8 \times \frac{1}{100} = 5.8\%$$

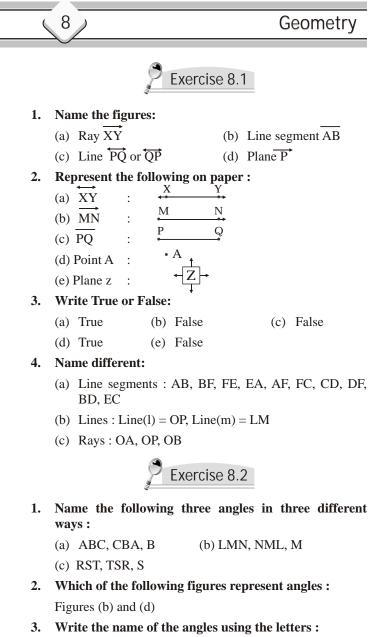
6. Write the following percentages as decimal fractions :

(a) 
$$35\% = 35 \times \frac{1}{100} = \frac{35}{100} = 0.35$$





Do yourself



- (a) 1 = AOC (b) 2 = COB
- (c) 3 = BOD (d) 4 = DOA
- 4. For each of the angles, name the vertex and the arms:

(a) Vertex = B, Arms = BA, BC

- (b) Vertex = S, Arms = ST, SR
- (c) Vertex = Y, Arms = YX, YZ
- (d) Vertex = M, Arms = ML, MN

Exercise 8.3

- 1. Measure the following angles using a protractor:
  - (a) ABC =  $60^{\circ}$  (b) XYZ =  $90^{\circ}$
  - (c)  $PQR = 120^{\circ}$  (d)  $LMN = 60^{\circ}$
- 2. Write the measures of the angles in the figures:
  - (a)  $BOA = 40^{\circ}$  (b)  $BOC = 30^{\circ}$
  - (c)  $BOD = 70^{\circ}$  (d)  $BOE = 100^{\circ}$
  - (e)  $AOC = 70^{\circ}$  (f)  $AOD = 110^{\circ}$
  - (g)  $AOE = 140^{\circ}$  (h)  $COD = 40^{\circ}$
  - (i)  $COE = 70^{\circ}$

### Exercise 8.4

- **1.** Tick  $(\checkmark)$  the correct answer :
  - (a) (ii) an angle (b) (i) degrees
  - (c) (iii) vertex (d) (iii) protractor
- 2. Classify the angles as acute, obtuse, right or straight angle :
  - (a) acute angle (b) obtuse angle
  - (c) right angle (d) acute angle
  - (e) obtuse angle (f) acute angle
- 3. Name the angles formed by the hands of the clocks :
  - (a) right angle (b) acute angle
  - (c) obtuse angle (d) obtuse angle
  - (e) straight angle (f) straight angle

Exercise 8.5

- 1. Do yourself "
- 2. Name the angles given below as acute, right, obtuse or straight angles :
  - (a)  $72^\circ =$ Acute angle (b)  $95^\circ =$ Obtuse angle
  - (c)  $90^\circ = \text{Right angle}$

(e)  $67^\circ$  = Acute angle

- (d)  $180^\circ$  = Straight angle
- (f)  $36^\circ = \text{Acute angle}$
- (g)  $11^\circ = \text{Acute angle}$  (h)  $20^\circ = \text{Acute angle}$
- 3. Do yourself
- **4.** Name all the angles shown in the figure : AOD, AOC, AOB, BOD, BOC, COD



## Exercise 8.6

- 1. Name the following triangles on the basis of their sides :
  - (a) Isosceles triangle (b) Scalene triangle
  - (c) Equilateral triangle (d) Scalene triangle
  - (e) Isosceles triangle (f) Scalene triangle
- 2. Find the third angle of the following triangles :
  - (a) We know that,  $A + B + C = 180^{\circ}$ 
    - $A + B = 60^{\circ} + 50^{\circ} = 110^{\circ}$
    - So,  $C = 180^{\circ} 110^{\circ} = 70^{\circ}$
  - (b) We know that,  $P + Q + R = 180^{\circ}$ 
    - $P + Q = 80^{\circ} + 30^{\circ} = 110^{\circ}$
    - So, R =  $180^{\circ} 110^{\circ} = 70^{\circ}$
  - (C) We know that,  $L + M + N = 180^{\circ}$ 
    - $A + B = 40^{\circ} + 80^{\circ} = 120^{\circ}$
    - So, N =  $180^{\circ} 120^{\circ} = 60^{\circ}$
- 3. Name the following triangles on the basis of their angles :
  - (a) Acute-angled triangle (b) Right-angled triangle
  - (c) Acute-angled triangle (d) Acute-angled triangle
  - (e) Right-angled triangle (f) Obtuse-angled triangle

Exercise 8.7

### **1.** Tick $(\checkmark)$ the correct answer:

(a) (iv) many (b) (iii) 8 cm (c) (i) 2 cm

- 2. Do yourself
- 3. Name the parts of the circle in the given figure :
  - (a) Centre = C (b) Radius = CR
  - (c) Diameter = AB (d) Chord = ML
  - (e) Arc = MAL
- 4. Find the radii of the circles as with the following diameters :
  - (a) Radius =  $\frac{\text{Diameter}}{2} = \frac{6}{2}$  cm = 3 cm
  - (b) Radius =  $\frac{\text{Diameter}}{2} = \frac{8}{2}$  cm = 4 cm
  - (c) Radius =  $\frac{\text{Diameter}}{2} = \frac{10}{2}$  cm = 5 cm
  - (d) Radius =  $\frac{\text{Diameter}}{2} = \frac{12}{2}$  cm = 6 cm
  - (e) Radius =  $\frac{\text{Diameter}}{2} = \frac{14}{2}$  cm = 7 cm
  - (f) Radius =  $\frac{\text{Diameter}}{2} = \frac{9}{2}$  cm = 4.5 cm

- 5. Find the diameters of the circles with the following radii :
  - (a) Diameter =  $2 \times \text{Radius} = (2 \times 5) \text{ cm} = 10 \text{ cm}$
  - (b) Diameter =  $2 \times \text{Radius} = (2 \times 6) \text{ cm} = 12 \text{ cm}$
  - (c) Diameter =  $2 \times \text{Radius} = (2 \times 4) \text{ cm} = 8 \text{ cm}$
  - (d) Diameter =  $2 \times \text{Radius} = (2 \times 8) \text{ cm} = 16 \text{ cm}$
  - (e) Diameter =  $2 \times \text{Radius} = (2 \times 7) \text{ cm} = 14 \text{ cm}$
  - (f) Diameter =  $2 \times \text{Radius} = (2 \times 3.5) \text{ cm} = 7 \text{ cm}$

- 1. Fill in the blanks :
  - (a) plane (b) two rays (c) rays
  - (d)  $90^\circ$ ,  $180^\circ$  (e) different
- 2. Measure the angles in the figure and classify them as acute, obtuse, straight or right angles:
  - (a)  $AOQ = 60^{\circ}$  : Acute angle
  - (b)  $AOS = 120^\circ$  : Obtuse angle
  - (c)  $AOT = 150^\circ$  : Obtuse angle
  - (d)  $AOB = 180^\circ$  : Straight angle
  - (e)  $POT = 120^{\circ}$  : Obtuse angle
  - (f)  $POS = 90^{\circ}$  : Right angle

### 3. Do yourself

- 4. The sum of all three angles of a triangle =  $180^{\circ}$ The sum of two angles =  $115^{\circ} + 15^{\circ} = 130^{\circ}$ 
  - So, the third angle =  $180^{\circ} 130^{\circ} = 50^{\circ}$
- 5. Do yourself

### 6. Write True or False. Rewrite the incorrect statements :

- (a) False. You can measure a line segment, but cannot measure a ray and a line.
- (b) True
- (c) False. A right-angled triangle has one right angle.
- (d) True

### 7. Complete the following table :

	Circumference (cm)	Diameter (cm)	Radius (cm)
(a)	2.4	0.8	0.4
(b)	21.6	7.2	3.6
(c)	18	6	3
(d)	5.4	1.8	0.9
(e)	59.4	19.8	9.9

2 e :

Find the perimeter of squares whose sides are :						
(a) Perimeter of the square	$= 4 \times S$					
	$= (4 \times 92) \text{ cm}$					
	= 368 cm					
(b) Perimeter of the square	$= 4 \times S$					
	$= (4 \times 71.9) \text{ cm}$					
	= 287.6 cm					
(c) Perimeter of the square	$= 4 \times S$					
	$= (4 \times 195) \text{ mm}$					
	= 780 mm					
(d) Perimeter of the square	$= 4 \times S$					
	$= (4 \times 47) \text{ m}$					
	= 188 m					
(e) Perimeter of the square	$= 4 \times S$					
	$= (4 \times 60.06) \text{ m}$					
	= 240.24 m					
(f) Perimeter of the square	$= 4 \times S$					
	$= (4 \times 97) \text{ cm}$					
	= 388 cm					
(g) Perimeter of the square	$= 4 \times S$					
	$= (4 \times 37) \text{ cm}$					
	= 148 cm					
(h) Perimeter of the square	$= 4 \times S$					
	$= (4 \times 19) \text{ cm}$					
	= 76 cm					
Find the side of squares wh	ose perimeters are :					
(a) Perimeter of the square						
	$= 4 \times S$					
S	$=(80 \div 4) \text{ cm}$					
	= 20  cm					
Thus, each side of the sq						
(b) Perimeter of the square = 208 mm =						
	$-4 \times 3$ $08 \div 4) \text{ mm}$					
	$S = (208 \div 4) \text{ mm}$ = 52 mm					

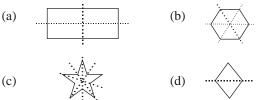
= 52 mmThus, each side of the square is 52 mm. (c) Perimeter of the square  $= 4 \times S$ 72.4 cm =  $4 \times S$  $S = (72.4 \div 4) \text{ cm}$ = 18.1 cmThus, each side of the square is 18.1 cm. (d) Perimeter of the square  $= 4 \times S$  $31 \text{ m} = 4 \times \text{S}$  $S = (31 \div 4) m$ = 7.75 m Thus, each side of the square is 7.75 m. (e) Perimeter of the square  $= 4 \times S$  $66.8 \text{ m} = 4 \times \text{S}$  $S = (66.8 \div 4) m$ = 16.7 m Thus, each side of the square is 16.7 m. (f) Perimeter of the square  $= 4 \times S$ 99 m =  $4 \times S$  $S = (99 \div 4) m$ Thus, each side of the = 24.75 m square is 24.75 m.

(d) (b) (c) (d) (b) three (c) line (d) two Perimeter and Area 10)Exercise 10.1 (a) Perimeter of the rectangle =  $2 \times (l + b)$  $= 2 \times (45 + 30) \text{ cm}$  $= (2 \times 75) \text{ cm} = 150 \text{ cm}$  $= 2 \times (22.5 + 15) \text{ cm}$  $= (2 \times 37.5) \text{ cm}$ = 75.0 cm $= (2 \times 240) \text{ cm} = 480 \text{ cm}$  $= (2 \times 8120) \text{ cm}$ = 16240 cm

Exercise 9.1

Symmetry

1. Draw the line of symmetry for these shapes :



- 2. Draw the line of symmetry in the following letters : (a)
- 3. Fill in the blanks : (a) Three
- Tick  $(\checkmark)$  the letter that has both vertical and 4. horizontal line of symmetry : Answer : H ✓
- 5. Do yourself

9

1. Find the perimeter of the rectangles in cm:

- (b) Perimeter of the rectangle =  $2 \times (l + b)$

(c) Perimeter of the rectangle =  $2 \times (l + b)$ Here,  $l = 1.5 \text{ m} = (1.5 \times 100) \text{ cm} = 150 \text{ cm}$ , So, perimeter of the rectangle =  $2 \times (150 + 90)$  cm

(d) Perimeter of the rectangle =  $2 \times (1 + b)$ Here,  $l = 51.7 \text{ m} = (51.7 \times 100) \text{ cm} = 5,170 \text{ cm}$ , and  $b = 29.5 \text{ m} = (29.5 \times 100) \text{ cm} = 2,950 \text{ cm}$ So, perimeter of rectangle =  $2 \times (5170 + 2950)$  cm

/111/

3.

- (g) Perimeter of the square  $= 4 \times S$  $240 \text{ cm} = 4 \times \text{S}$  $S = (240 \div 4) \text{ cm}$ = 60 cmThus, each side of the square is 60 cm. (h) Perimeter of the square  $= 4 \times S$  $178 \text{ m} = 4 \times \text{S}$  $S = (178 \div 4) \text{ m}$ = 44.5 m Thus, each side of the square is 44.5 m. 4. Perimeter of the rectangular playground  $= 2 \times (l + b)$  $= 2 \times (125 + 95)$  $= (2 \times 220) \text{ m}$ = 440 m The boy walks around the playground = 3 times  $= 3 \times$  Perimeter of the playground  $= (3 \times 440) \text{ m}$ = 1320 m So, the boy covers the distance of 1320 m. **5.** Perimeter of the painting  $= 2 \times (l + b)$  $= 2 \times (25 + 18)$  cm  $= (2 \times 43) \text{ cm}$ = 86 cmRibbon needed to fix around the painting 1 time =  $1 \times Its$ perimeter Ribbon needed to fix around the painting 3 times  $= 3 \times \text{Its perimeter}$  $= (3 \times 86) \text{ cm}$ = 258 cmAnju has the ribbon = 150 cm So, more ribbon will be needed = (258 - 150) cm = 108 cmThus, 108 cm more ribbon will be needed to fix around the painting 3 times. **6.** Length of the wire needed to fence the garden = Perimeter of the garden. Perimeter of the rectangular garden =  $2 \times (1 + b)$  $= 2 \times (65 + 58) \text{ m}$  $= (2 \times 123) \text{ m}$ = 246 m So, the wire needed to fence the garden is 246 m Cost of fencing 1 m = 3Cost of fencing 246 m =  $(3 \times 246)$ =`738 7. Perimeter of the square =  $4 \times S$  $272 \text{ m} = 4 \times \text{S}$  $S = (272 \div 4) m$ = 68 mSo, the each side of the square is 68 m. 8. Side of the square garden = 100 mPerimeter of the garden  $= 4 \times S$  $= (4 \times 100) \text{ m}$ = 400 mRahul runs 400 m along the sides of the garden = 1 time So, Rahul runs 1600 m along the sides of the garden = $(1600 \div 400)$  times = 4 times Thus, if Rahul wants to cover 1600 m, he should run 4 times.
- 9. Perimeter of the rectangle = 30 cm, Breadth = 6 cm

Length of the rectangle =  $\frac{Perimeter}{2} - Breadth$ So, Length =  $\frac{30}{2} - 6$ 15 - 6 = 9 cm.

Thus, the length of the rectangle is 9 cm.

# Find the area of the following figures, if each square is of 1 sq cm: (a) Number of squares covered by the figure

- Complete squares = 4Half squares = 6Area of the figure =  $(4 + 1/2 \times 6)$  sq cm = (4 + 3) sq cm =7 sq cm(b) Number of squares covered by the figure Complete squares = 8More than half squares = 4Less than half squares = 4 (ignored) Area of the figure = (8 + 4) sq cm = 12 sq cm(c) Number of squares covered by the figure Complete squares = 7More than half squares = 2Less than half squares = 1 (ignored) Area of the figure = (7 + 2) sq cm = 9 sq cm(d) Number of squares covered by the figure Complete squares = 4Half squares = 12Area of the figure =  $(4 + 1/2 \times 12)$  sq cm = (4 + 6) sq cm = 10 sq cm(i) Figure (b) has the biggest area. (ii) Figure (a) has the smallest area. 2. Find the area of the figures, if area of each square is 1 sa cm: (a) Number of squares covered by the figure Complete squares = 8More than half squares = 5Less than half squares = 3 (ignored) Area of the figure = (8 + 5) sq cm = 13 sq cm (b) Number of squares covered by the figure More than half squares = 8Less than half squares = 20 (ignored) Area of the figure = 8 sq cm(c) Number of squares covered by the figure Complete squares = 6More than half squares = 9Half squares = 2
  - Less than half squares = 4 (ignored)

Area of the figure = 
$$(6+9+1/2 \times 2)$$
 sq cm  
=  $(6+9+1)$  sq cm  
= 16 sq cm

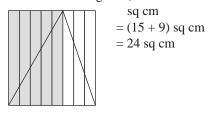
$$= 16 \text{ sq cm}$$

- (i) Figure (c) has the biggest area.
- (ii) Figure (b) has the smallest area.
- 3. Find the area of the figures, if the area of each square is 1 sq cm:
  - (a) The triangle is just half of the rectangle The rectangle is filled with 30 squares Area of the rectangle = 30 sq cm

Thus, the area of the triangle  $=\frac{1}{2} \times 30$  sq cm = 15 sq cm (b) We divide the rectangle into two smaller rectangles so that the triangle contains the half of each smaller

- rectangle Area of coloured rectangle = 30 sq cm
- Area of white rectangle = 18 sq cm

Area of triangle = 
$$(1/2 \times 30 + 1/2 \times 18)$$





1. Find the area of the rectangle in square metres:

(a) **Given**: 
$$l = 15 \text{ cm} = \frac{15}{100} \text{ m}, b = 9 \text{ cm} \frac{9}{100} \text{ m},$$

Area of the rectangle 
$$= l \times b$$
  
 $= \left(\frac{15}{100} \times \frac{9}{100}\right)$  sq m  
 $= \frac{135}{10,000} = 0.0135$  sq m  
 $= \frac{0.0135}{100}$  sq m  
 $= \frac{40.5}{100}$  m b = 40.5 cm  $= \frac{40.5}{100}$  m  
 $= \frac{405}{1000}$  m  
Area of the rectangle  $= l \times b$   
 $40.5 = \left(\frac{56}{100} \times \frac{405}{1000}\right)$  sq m  
 $\frac{\times 56}{2430} = \frac{22680}{100000}$  sq m  
 $\frac{+20250}{=22680} = 0.22680$  sq m  
 $= 0.22680$  sq m  
 $= 0.2268$  sq m  
(c) **Given** :  $l = 2.8$  m  $= \frac{28}{10}$  m,  $b = 80$  cm  $= \frac{80}{100}$  cm  
Area of the rectangle  $= l \times b$   
 $= \left(\frac{28}{28} \times \frac{80}{100}\right)$  sq m

$$= \left(\frac{28}{10} \times \frac{80}{100}\right) \text{ sq m}$$
  
=  $\frac{2240}{1000} \text{ sq m} = 2.240 \text{ sq m}$   
= 2.24 sq m

(d) **Given**: 
$$l = 35 \text{ m}$$
,  $b = 29 \frac{2}{7} \text{ m} = \frac{205}{7} \text{ m}$   
Area of the rectangle  $= l \times b \left( \frac{5}{35} \times \frac{205}{71} \right) \text{ sq m}$   
 $= (5 \times 205) \text{ sq m}$   
 $= 1025 \text{ sq m}$   
(e) **Given**:  $b = 21.7 \text{ m} = \frac{217}{10} \text{ m} l = 9.6 \text{ m} = -\frac{96}{10} \text{ m}$   
Area of the rectangle  $= l \times b$   
 $\frac{217}{1302} = \left( \frac{217}{10} \times \frac{96}{10} \right) \text{ sq m}$   
 $\frac{\pm 19530}{=20832} = 20832 \text{ sq m}$   
(f) **Given**:  $l = 7\frac{3}{4} \text{ m} = \frac{31}{4} \text{ m}$ ,  $b = 76.4 \text{ cm} = \frac{76.4}{100} \text{ m}$ ,

$$\frac{764}{1000}$$
 m

Area of the rectangle =  $l \times b$ 

$$\frac{191}{\frac{\times 31}{191}} = \left(\frac{31}{4} \times \frac{764}{1000}\right) \text{sq m}$$
  
$$\frac{\frac{\times 31}{191}}{\frac{+5730}{=5921}} = \left(\frac{31 \times 191}{1000}\right) \text{sq m}$$
  
$$= \frac{5921}{1000} \text{ sq m}$$
  
$$= 5.921 \text{ sq m}$$

2. Find the area of the squares whose one side is :

(a) Area of the square =  $S \times S$ 

 $= (7 \times 7)$  sq cm = 49 sq cm

(b) Area of the square  $= S \times S$ 

$$\begin{array}{rcl} 2 & 4 & 3 \\ \underline{2 & 4 & 3} & = & (24.3 \times 24.3) \text{ sq m} \\ \underline{\times 2 & 4 & 3} & = & \left(\frac{243}{10} \times \frac{243}{10}\right) \text{ sq m} \\ \underline{9 & 7 & 2 & 0} & = & \frac{59049}{100} & \text{ sq m} \\ \underline{+4 & 8 & 6 & 0 & 0} \\ \underline{=5 & 9 & 0 & 49} & = & 590.49 \text{ sq m} \end{array}$$

- (c) Area of the square =  $S \times S$ 
  - $129 = (12.9 \times 12.9) \text{ sq cm}$   $\frac{\times 129}{1161} = \left(\frac{129}{10} \times \frac{129}{10}\right) \text{ sq m}$   $\frac{2580}{\pm 12900} = \frac{16641}{100} \text{ sq m}$  = 166.41 sq cm

(d) Area of the square  $= S \times S$ 

$$\begin{array}{rcrr} 3 & 4 & = & \left(\frac{340}{100} \times \frac{340}{100}\right) \, \mathrm{sq} \, \mathrm{m} \\ \underline{\times 3 \, 4} & = & \left(\frac{340}{100} \times \frac{340}{100}\right) \, \mathrm{sq} \, \mathrm{m} \\ \underline{+ 1020} & = & \frac{34 \times 34}{100} \, \mathrm{sq} \, \mathrm{m} \\ \underline{= 1156} & = & \frac{1156}{100} \, \mathrm{sq} \, \mathrm{m} \\ = & 11.56 \, \mathrm{sq} \, \mathrm{cm} \end{array}$$

3. Length of the playground (l) = 7.25 m Breadth of the playground (b) = 5.5 m Area of a rectangle =  $l \times b$ 

Area of the notice board 
$$= 8 \times \text{Area of 1 poster}$$

$$= (8 \times 0.675)$$
 sq m

= 5.400 or 5.4 sq m

So, the area of the notice board is 5.4 sq m.

9. Perimeter of the square  $= 4 \times S$ 

$$40 \text{ cm} = 4 \times \text{S}$$
$$\text{S} = \frac{40}{4} \text{ cm} = 10 \text{ cm}$$

Area of the square =  $S \times S$ 

$$= (10 \times 10)$$
 sq cm

= 100 sq cm

Thus the area of the square is 100 sq cm.

10. What would be the minimum length of fencing required for an animals pen of area 24 sq m? Complete the table and find the answer :

Animals pen Length (m) Breadth (m) Area (sq m) Perimeter (m)

А	6	4	24	20
В	12	2	24	28
С	8	3	24	22
D	9.6	2.5	24	24.2



### 1. Fill the table :

	Length	Breadth	Perimeter	Area
(a)	12.9 m	7.1 m	40 m	91.59 m ²
(b)	25.4 cm	32 cm	114.8 cm	812.8 cm ²
(c)	13.9 cm	11.7 cm	51.20 cm	162.63 sq cm

2. Perimeter of the rectangular garden =  $2 \times (l + b)$ 

=  $2 \times (95 + 80)$  m =  $(2 \times 175)$  m =  $(2 \times 175 \times 100)$  cm

= 35,000 cm

Rohit covers 35 cm in = 1 step

He will take in 35,000 cm =  $\frac{35000}{35}$  steps = 1000 steps Thus, Rohit will take 1000 steps to run once around the garden.

**3.** Perimeter of the square field  $= 4 \times S$ 

$$= (4 \times 82) \text{ m} = 328 \text{ m}$$

Area of the square field =  $S \times S$ 

$$82 = (82 \times 82) \text{ sq m}$$
  

$$\frac{\times 82}{164} = 6724 \text{ sq m}$$
  

$$\frac{+6560}{=6724}$$

Area of the playground = 
$$(7.25 \times 5.5)$$
 sq m  

$$\frac{725}{\times 55} = \left(\frac{725}{100} \times \frac{55}{10}\right)$$
 sq m  

$$\frac{+36250}{=39875} = \frac{39875}{1000}$$
 sq m  

$$\frac{+39875}{=39.875} = 39.875$$
 sq m

**4.** Area of a square  $= \mathbf{S} \times \mathbf{S}$ 

Area of the square field =  $(110 \times 110)$  sq m

= 12100 sq m

**5.** Area of the rectangular carpet  $= l \times b$ 

$$\begin{array}{rcl}
1 & 1 & 6 & = & (14 \times 11.6) \, \text{sq m} \\
\underline{\times 1 \, 4} & & = & \left(14 \times \frac{116}{10}\right) \, \text{sq m} \\
\underline{+ 1 \, 1 \, 6 \, 0} \\
\underline{= \, 1 \, 6 \, 2 \, 4} & & = & \frac{1624}{10} \, \text{sq m} \\
& & = & 162.4 \, \text{sq m}
\end{array}$$

Area of the square carpet =  $S \times S$ 

$$= (15 \times 15) \text{ sq m}$$

Comparing the areas, we find, 225 sq m > 162.4 sq m

Thus, the square carpet of side 15 m is bigger.

**6.** Area of the rectangular playground =  $l \times b$ 

$$= (150 \times 92) \text{ sq m}$$
  
= 13800 sq m

The cost laying grass in the area of 1 sq m = 0.75

The cost of laying grass in the area of 13800 sq m =  $\stackrel{\sim}{}(0.75\times13800)$ 

$$\left(\frac{75}{100} \times 13800\right)$$
 sq m  
=  $(75 \times 138)$   
=  $10,350$ 

Thus, the cost of laying grass all over the rectangular playground is  $\ 10,350$ 

7. Area of the square  $plot = S \times S$ 

=481280	The cost of 1 sq m area = $1880$
+376000	200 SQ III
11280	= ` 256 sq m
×256	= (16 × 16) sq m
1880	$-(16 \times 16)$ so m

The cost of 256 sq m area =  $(1880 \times 256) = 4,81,280$ Thus, the cost of the plot is 4,81,280

8. Area of 1 poster  $= l \times b$ 

= 
$$(0.75 \times 0.90)$$
 sq m  
=  $\left(\frac{75}{100} \times \frac{90}{100}\right)$  sq m =  $\frac{675}{1000}$  sq m  
= 0.675 sq m



## 4. Find the area of each letter, if the area of each square is 1 sq cm:

(a) A = 1 complete sq + 7 more than half sq + 2 half sq + 3 less than half sq (ignored)

= 
$$(1+7+2 \times \frac{1}{2})$$
 sq cm =  $(1+7+1)$  sq cm  
= 9 sq cm

(b) R = 4 complete sq + 7 more than half sq + 2 less than half sq ignored)

= (4 + 7) sq cm = 11 sq cm

(c) E = 6 complete sq + 4 half sq + 2 less than half sq (ignored)

= 
$$(6 + 4 \times \frac{1}{2})$$
 sq cm =  $(6 + 2)$   
= 8 sq cm

(d) A = 1 complete sq + 7 more than half sq + 2 half sq + 3 less than half sq (ignored)

= 
$$(1+7+2\times\frac{1}{2})$$
 sq cm =  $(1+7+1)$  sq cm  
= 9 sq cm

The total area of the word AREA = (9 + 11 + 8 + 9) sq cm

= 37 sq cm

5. Do yourself.

- Find the volume of the following by counting the cubes (take 1 cube = 1 cu cm):
   (a) Total number of cubes in 1 layer = 4 In 2 layers = 4 × 2 = 8
  - $\therefore$  The volume = 8 cu cm
  - (b) Total number of cubes = 12
    - $\therefore$  The volume = 12 cu cm
  - (c) Total number of cubes in 1 layer = 16
    - In 4 layers  $= 16 \times 4 = 64$
    - $\therefore$  The volume = 64 cu cm
  - (d) Total number of cubes in 1 layer = 6
    - In 2 layers  $= 6 \times 2 = 12$
    - $\therefore$  The volume = 12 cu cm
  - (e) Total number of cubes = 14
  - ∴ The volume = 14 cu cm (f) Total number of cubes = 13
    - 1001 01 CUUCS = 13
    - $\therefore$  The volume = 13 cu cm
  - (g) Total number of cubes in 1 layer = 9 In 2 layers  $= 9 \times 2 = 18$ 
    - $\therefore \text{ The volume } = 18 \text{ cu cm}$
  - (h) Total number of cubes in 1 layer = 12

In 2 layers 
$$= 12 \times 2 = 24$$

 $\therefore$  The volume = 24 cu cm

- 2. Find the volume of the solids given below. Write whether the solid is a cube or cuboid :
  - (a) In the figure, l = 2 cm, b = 2 cm, h = 2 cm i.e., l = b = h So, the solid is *cube*. Volume of the cube = l × l × l = (2 × 2 × 2) cu cm = 8 cu cm
    (b) In the figure, l = 7 cm, b = 2 cm, h = 5 cm So, the solid is cuboid.
  - Volume of the cuboid  $= l \times b \times h$   $= (7 \times 2 \times 5)$  cu cm = 70 cu cm (c) In the figure, l = 16 m, b = 8 m, h = 7 m So, the solid is cuboid. Volume of the cuboid  $= l \times b \times h$  $1 \ 2 \ 8$
  - $= (16 \times 8 \times 7) \text{ cu m}$  = 896 cu m(d) In the figure, l = 8 m, b = 8 m, h = 8 mi.e., l = b = h
    - So, the solid is cube. Volume of the cube =  $l \times l \times l$
  - $= (8 \times 8 \times 8) \text{ cu m}$  = 512 cu m 64  $\times 8$  512
- 3. Doyourself :

1.	Find the volume of each of the following :	25
	(a) $l = 15 \text{ mm}, b = 25 \text{ mm}, h = 15 \text{ mm}$	×15
	The volume $= l \times b \times h$	375
	$=(15 \times 25 \times 15)$ cu mm	375
	= 5625 cu mm	×15
		5625

17 (b) l = 17 cm, b = 18 cm, h = 12 cm $\times 18$ The volume  $= l \times b \times h$ 306  $= (17 \times 18 \times 12)$  cu cm 306 = 3672 cu cm $\times 1.2$ 3672 (c) l = 9 m, b = 5 m, h = 11 m45 The volume  $= l \times b \times h$  $\times 11$  $= (9 \times 5 \times 11)$  cu m 495

= 495 cu m

5. Fill in the blanks :

	Length (l)	Breadth (b)	Height (h)	Volume (V)
(a)	6 cm	6 cm	6 cm	216 cu cm
(b)	7 cm	8 cm	4 cm	224 cu cm
(c)		9 cm	3 cm	162 cu cm
(d)	14 mm	11 mm	7 mm	1078 cu cm
(e)	23 mm	16 mm	12 mm	4416 cu mm

### 6. Match the volume with the edge of the cube :



7. Volume of 1 brick  $= l \times b \times h$   $= (16 \times 5 \times 5)$  cu cm = 400 cu cm Thus, the volume of the brick is 400 cu cm Volume of 10 bricks  $= 10 \times$  volume of 1 brick  $= (10 \times 400)$  cu cm = 4000 cu cm

Thus, the total volume of the pile is 4000 cu cm.

8. Volume of the swimming pool = length  $\times$  width  $\times$  depth

$$\begin{array}{rcl}
45 &= (26 \times 15 \times 1.5) \, \mathrm{cu} \, \mathrm{m} \\
\frac{\times 13}{585} &= (26 \times 15 \times 1.5) \, \mathrm{cu} \, \mathrm{m} \\
&= (26 \times 15 \times 1.5) \, \mathrm{cu} \, \mathrm{m} \\
&= (26 \times 15 \times 1.5) \, \mathrm{cu} \, \mathrm{m} \\
&= (13 \times 15 \times 3) \, \mathrm{cu} \, \mathrm{m} \\
&= 585 \, \mathrm{cu} \, \mathrm{m} \\
&= \frac{438.75}{4} \, \mathrm{of} \, 585) \, \mathrm{cu} \, \mathrm{m} \\
&= \frac{-12}{30} \\
&= \frac{-12}{30} \\
&= \frac{-12}{30} \\
&= \frac{-28}{20} \\
&= 438.75 \, \mathrm{cu} \, \mathrm{m} \\
&= \frac{-28}{20} \\
&= 438.75 \, \mathrm{cu} \, \mathrm{m} \\
&= \frac{-20}{20} \\
&= 438.75 \, \mathrm{cu} \, \mathrm{m} \\
&= \frac{-20}{20} \\
&= 438.75 \, \mathrm{cu} \, \mathrm{m} \\
&= \frac{-20}{20} \\
&= 438.75 \, \mathrm{cu} \, \mathrm{m} \\
&= \frac{-20}{20} \\
&= 438.75 \, \mathrm{cu} \, \mathrm{m} \\
&= \frac{-20}{20} \\
&= 438.75 \, \mathrm{cu} \, \mathrm{m} \\
&= 585 \, \mathrm{cu} \, \mathrm{m} \\
&= -28 \, \mathrm{cu} \, \mathrm{cu} \, \mathrm{m} \\
&= -28 \, \mathrm{m}$$

Thus, the volume of water in the pool is 438.75 cu m.

**9.** Volume of air in the room = Volume of the room

Volume of the room 
$$= l \times b \times h$$

$$= (4 \times 3 \times 3.5) \text{ cu m}$$
$$= (4 \times 3 \times \frac{35}{10}) \text{ cu m}$$
$$= (2 \times 3 \times 7) \text{ cu m}$$

= 42 cu m

Thus, the volume of air in the room is 42 cu m.

**10.** Volume of 4 cm cube =  $S \times S \times S$ 

$$\begin{array}{rcl}
\frac{27}{64} & = (4 \times 4 \times 4) \text{ cu cm} \\
= 64 \text{ cu cm} \\
-\frac{128}{448} \\
\frac{-448}{0} \\
\end{array} \quad \begin{array}{r} = 64 \text{ cu cm} \\
\text{Volume of 12 cm cube} = S \times S \times S \\
= (12 \times 12 \times 12) \text{ cu cm} \\
\end{array} \quad \begin{array}{r} \frac{124}{1728} \\
\frac{12}{1728} \\
\end{array}$$

The number of 4 cm cubes = 
$$\frac{\text{Volume of } 12 \text{ cm cube}}{\text{Volume of 4 cm cube}} = \frac{1728}{64}$$

### = 27 cubes

Thus, the number of 4 cm cubes that can be cut from a 12 cm cube is 27.

**11.** Volume of 1 box = 1.5 cu m

Volume of the room = $l \times b \times h$	96
$=(12 \times 8 \times 6)$ cu m	<u>×6</u>
= 576 cu m	576

The number of boxes = Volume of room  $\div$  Volume of box

$$= 576 \div \frac{15}{10} = 576 \times \frac{10}{15}$$
$$= 192 \times 2 = 384$$

So, 384 boxes can be packed in the room.

- 1. Do yourself
- 2. Do yourself
- 3. Do yourself
- 4. Match the net to its shape :
  - (a) -(iv), (b) -(i), (c) -(ii), (d) -(iii)

1. Find the volume of solid in cu cm when the volume of water displaced is :

We have, 1 ml = 1 cu cm, so

- (a) The volume of solid = 150 ml = 150 cu cm
- (b) The volume of solid = 900 ml = 900 cu cm
- (c) The volume of solid = 75 ml = 75 cu cm
- (d) The volume of solid = 250 ml = 250 cu cm
- 2. Find the volume of water displace in milliliter, litre if the volume of the solid is :
  - (a) The volume of the solid = 15 cu cmWe have, 1 cu cm = 1 ml, so The volume of water displaced by the solid =  $(1 \times 15) m$ = 15 ml(b) The volume of the solid = 750 cu cm We have, 1 cu cm = 1 ml, so The volume of water displaced by the solid  $= (1 \times 750) ml$ = 750 ml(c) The volume of the solid = 815 cu mWe have, 1 cu  $\mathbf{m} = 1000 l$ , so The volume of water displaced by the solid  $= (1000 \times 815) l$ = 8,15,000 l(d) The volume of the solid = 5 cu cmWe have, 1 cu cm = 1 ml, so The volume of water displaced by the solid  $= (1 \times 5) ml$ = 5 mlVolume of cuboid =  $l \times b \times h$ , so Volume of the tank =  $(4 \times 3 \times 1)$  cu m = 12 cu m We have, 1 cu m = 1000 l, so The volume of water required to fill the tank  $= (1000 \times 12) l$ = 12,000 lThus, 12,000 litre water is required to fill the tank. Volume of a cuboid =  $l \times b \times h$ , so Volume of the swimming pool =  $(25 \times 15 \times 2)$  cu m = 750 cu mWe have, 1 cu m = 1000 l, so Volume of the swimming pool =  $(750 \times 1000) l$ = 7,50,000 l

Thus, the volume of the swimming pool is 7,50,000 litre.

3.

4.

= 60 mm + 6 mm = 66 mm

- (b)  $24 \text{ cm } 8 \text{ mm} = (24 \times 10) \text{ mm} + 8 \text{ mm}$ 
  - = 240 mm + 8 mm = 248 mm
- (c)  $30 \text{ cm } 1 \text{ mm} = (30 \times 10) \text{ mm} + 1 \text{ mm}$ = 300 mm + 1 mm = 301 mm
- (d)  $83 \text{ cm} 5 \text{ mm} = (83 \times 10) \text{ mm} + 5 \text{ mm}$

= 830 mm + 5 mm = 835 mm

### 7. Convert the following into metres :

- (a)  $4 \text{ km } 6 \text{ hm } 4 \text{ dam } 3 \text{ m} = (4 \times 1000) \text{ m} + (6 \times 100) \text{ m}$  $+ (4 \times 10) \text{ m} + 3 \text{ m} = 4000 \text{ m} + 600 \text{ m} + 40 \text{ m} + 3 \text{ m}$ = 4643 m
- (b)  $12 \text{ km } 5 \text{ hm } 4 \text{ dam } 2 \text{ m} = (12 \times 1000) \text{ m} + (5 \times 100)$  $m + (4 \times 10) m + 2 m$ = 12000m + 500m + 40m + 2m= 12542 m
- (c) 1 km 1 hm 1 dam 1 m =  $(1 \times 1000)$  m +  $(1 \times 100)$  m  $+ (1 \times 10) m + 1 m = 1000m + 100 m + 10 m + 1 m$ = 1111 m



### 1. Fill in the blanks :

- (a)  $325 \text{ kg} = (325 \times 1000) \text{ g} = 3,25,000 \text{ g}$
- (b)  $28.7 \text{ g} = (28.7 \times 1000) \text{ mg} = 28,700 \text{ mg}$
- (c)  $989 \text{ mg} = (989 \div 10) \text{ cg} = 98.9 \text{ cg}$

(d) 
$$27 \text{ cg} = (27 \div 100) \text{ g} = 0.27 \text{ g} = (0.27 \div 10) \text{ dag}$$
  
= 0.027 dag

- (e)  $625 \text{ dg} = (625 \times 10) \text{ cg} = 6250 \text{ cg}$
- (f)  $1171 \text{ mg} = (1171 \div 1000) \text{ g} = 1.171 \text{ g}$
- (g)  $349 \text{ hg} = (349 \times 100) \text{ g} = 34900 \text{ g} = (34900 \times 10) \text{ dg}$ = 3,49,000 dg

(h) 784 dg = (784 
$$\div$$
 10) g = 78.4 g = (78.4  $\div$  1000) kg  
= 0.0784 kg

(i)  $5 \text{ mg} = (5 \div 1000) \text{ g} = 0.005 \text{ g} = (0.005 \div 1000) \text{ kg}$ = 0.000005 kg

### 2. Convert the following :

(a)  $8 \text{ kg } 18 \text{ g} = (8 \times 1000) \text{ g} + 18 \text{ g} = 8000 \text{ g} + 18 \text{ g}$ = 8018 g

- (b) 543 g 256 mg =  $(543 \times 1000)$  mg + 256 g = 543000 mg + 256 mg = 5,43,256 mg
- (c) 24.125 kg = 24 kg + 0.125 kg = 24 kg + (0.125 kg) $\times 1000$ ) g = 24 kg + 125 g = 24 kg 125 g
- (d)  $2.142 \text{ dag} = 2 \text{ dag} + 0.142 \text{ dag} = (2 \times 10) \text{ g} +$  $(0.142 \times 10)$  g = 20 g + 1.42 g = 20 g + 1 g + 0.42 g = 21 g + (0.42 g) $\times$  1000) mg = 21 g + 420 mg = 21 g 420 mg (e)  $142.7 \text{ dg} = (142.7 \times 10) \text{ cg}$

$$= (142.7 \times 10 \times 10) \text{ mg} = 14270 \text{ mg}$$

- (f)  $1.483 \text{ hg} = (1.483 \times 100) \text{ g} = 148.3 \text{ g}$
- 3. Convert the following :
  - (a)  $3080 \text{ g} = 3000 \text{ g} + 80 \text{ g} = (3000 \div 1000) \text{ kg} + 80 \text{ g}$ = 3 kg + 80 g = 3 kg 80 g
  - (b)  $9335 \text{ g} = 9300 \text{ g} + 35 \text{ g} = (9300 \div 1000) \text{ hg} + 35 \text{ g}$ = 93 hg + 35 g = 93 hg 35 g
  - (c)  $5298 \text{ dg} = 5290 \text{ dg} + 8 \text{ dg} = (5290 \div 10) \text{ g} + 8 \text{ dg}$ = 529 g + 8 dg = 529 g 8 dg

(d) 
$$6.895 \text{ hg} = (6.895 \div 10) \text{ kg} = 0.6895 \text{ kg}$$

$$dm = (8 \times 10) dm + 8 dm = 80$$
  
= 88 dm  
$$dm = (25 \times 10) dm + 5 dm =$$
  
= 255 dm  
$$dm = (103 \times 10) dm + 3 dm$$

= 1030 dm + 3 dm = 1033 dm

(d) 7 hm 4 dam = 
$$(7 \times 100)$$
 m +  $(4 \times 10)$  m  
= 700 m + 40 m = 740 m

$$= (740 \times 10) \text{ dm} = 7400 \text{ dm}$$

### 5. Convert the following into cm :

- (a)  $30 \text{ mm} = (30 \div 10) \text{ cm} = 3 \text{ cm}$
- (b)  $285 \text{ mm} = (285 \div 10) \text{ cm} = 28.5 \text{ cm}$
- (c)  $63 \text{ m } 75 \text{ cm} = (63 \times 100) \text{ cm} + 75 \text{ cm}$
- = 6300 cm + 75 cm = 6375 cm
- (d)  $40 \text{ m} 50 \text{ cm} = (40 \times 100) \text{ cm} + 50 \text{ cm}$ = 4000 cm + 50 cm = 4050 cm

### 6. Convert the following into mm :

- (a)  $6 \text{ cm } 6 \text{ mm} = (6 \times 10) \text{ mm} + 6 \text{ mm}$
- 117

Measurement

## Exercise 12.1

- **1.** Tick  $(\checkmark)$  the correct answer :
  - (a) (iv) 9 m 72 mm

(12)

- [9072 mm = 9000 mm + 72 mm]
  - $= (9000 \div 1000) \text{ m} + 72 \text{ mm}$
- = 9 m + 72 mm = 9 m 72 mm(b) (iii) 14050 m
- $[14 \text{ km} = (14 \times 1000) \text{ m} = 14000 \text{ m}; 5 \text{ dam}]$  $= (5 \times 10) \text{ m}$ 
  - $= 50 \text{ m}; \quad 14000 + 50 = 14050 \text{ m}$
- (c) (ii) 0.0435 hm  $[435 \text{ cm} = (435 \div 100) \text{ m} = 4.35 \text{ m} = (4.35 \div 100) \text{ hm}$ 
  - = 0.0435 hm]

### 2. Fill in the blanks :

- (a)  $5 \text{ m} = (5 \times 100) \text{ cm} = 500 \text{ cm}$
- (b)  $2.2 \text{ km} = (2.2 \times 1000) \text{ m} = 2200.0 \text{ m} = 2200 \text{ m}$
- (c)  $532 \text{ cm} = 500 \text{ cm} + 32 \text{ cm} = (500 \div 100) \text{ m} + 32 \text{ cm}$ = 5 m + 32 cm = 5 m 32 cm
- (d)  $4 \text{ dam} = (4 \times 10) \text{ m} = 40 \text{ m}$
- (e)  $1 \text{ cm} = (1 \times 10) \text{ mm} = 10 \text{ mm}$
- (f) 3486 m = 3000 m + 486 m
  - $= (3000 \div 1000) \text{ km} + 486 \text{ m} = 3 \text{ km} 486 \text{ m}$

### 3. Convert the following into metres :

- (a)  $6 \text{ km } 416 \text{ m} = (6 \times 1000) \text{ m} + 416 \text{ m}$ = 6000 m + 416 m = 6416 m
- (b)  $23 \text{ km } 25 \text{ m} = (23 \times 1000) \text{ m} + 25 \text{ m}$
- = 23000 m + 25 m = 23025 m(c)  $80 \text{ km 5 m} = (80 \times 1000) \text{ m} + 5 \text{ m}$ 
  - = 80000 m + 5 m = 80005 m
- $= (1 \times 1000) \text{ m} + 1 \text{ m} = 1000 \text{ m} + 1 \text{ m}$ (d) 1 km 1 m = 1001 m

### 4. Convert the following into dm :

- (a) 8 m 8 d dm + 8 dm
- 250 dm + 5 dm (b) 25 m 5
- (c)  $103 \text{ m} 3 \text{ dm} = (103 \times 10) \text{ dm} + 3 \text{ dm}$

4.	(e) $6582 \text{ mg} = (6582 \div 10) \text{ cg} = 658.2 \text{ cg}$ (f) $6095 \text{ dg} = 6090 \text{ dg} + 5 \text{ dg} = (6090 \div 10) \text{ g} + 5 \text{ dg}$ = 609  g + 5  dg = 609  g 5  dg (b) $5900$ [5 kg 900 g = (5 × 1000) g + 900 g = 5000  g + 900  g = 5900  g]
	Exercise 12.3
1.	(a) True, (b) False
	(c) True, (d) True
	(e) True, (f) False
2.	(a) 8 l into $ml$
	$= 8 \times 1000 \ ml$
	$= 8000 \ ml$
	(b) $4 kl 25 l$ into $l$
	$= 4 \times 1000 \ l + 25 \ l$
	= $4025 l$ (c) $12.53 hl$ into $cl$
	(l) 12.53  m mo  ll = 12.53 × 10,000 cl
	= 1,25,300 cl
	(d) 2117 <i>ml</i> into 1 and <i>ml</i>
	$= 2000 \ ml \ + 117 \ ml$
	$= 2l \ 117 \ ml$
	(e) $143 dl$ into $dal$ and $dl$ = $100 dl + 43 dl$
	$= (100 \pm 100)  dal + 43  dl$
	= I  dal  43  dl
	(f) 1572.67 <i>l</i> into kl
	$= (15772.6 \div 1000) \text{ kl}$
	= 1.5726  kl
	(g) 817 ml into dal = $(817 \div 10,000) dal$
	= (817 - 10,000) aat = 0.0817 dal
	(h) 507.3 kl into <i>l</i>
	$=(507.3 \times 1000)l$
	= 50,730 l
	Exercise 12.4

## Exercise 12.4

### 1. Add the following :

		· · · · ·	9			
(a)	km	m		(b)	km	m
	6	235			9	650
	+ 3	175			16	240
	9	410			+ 27	450
=	= 9 km 4	10 m			= 53	340
					= 53 km	n 340 m
(c)	kg	g		(d)	19. 5	08 g
	32	435			26.1	0
	13	278			+ 58.8	<u> </u>
	+ 45	713			104. 5	38 g
	= 45 kg	713 g			= 104. 5	538 g

(e)		l	ml	(f)
		12	550	
	+	27	060	
		39	610	
	= (	39 <i>l</i> 6	10 ml	

#### 

ml

m

075

280 795

l

### 2. Subtract the following :

kg

145

 $\frac{-9}{=136}$ 

= 136 kg 175 k

(a)

(c)

m	cm	(b)
28	37	
_ 16	59	
= 11	78	
= 11 m '	78 cm	=

cm

600

425

175

(d)	kg	cm
. ,	64	825
	- 43	520
	= 21	305
	= 21 g	305 mg

km

34

<u>15</u> 795 15km 795 m

- 18

(e)	kl	l	(f)	l	ml
	147	325		78	595
	- 84	528		- 57	287
	= 62	797		= 21	308
:	= 62 kg	797 <i>l</i>		= 21 l	308 ml

### **3.** Multiply the following :

(a) kg g 23 245 $\times$ 12 = 278 940 = 278  kg 940 g	(b) $l$ ml 25 250 $\times$ 5 = 126 250 = 126 l 250 ml
(c) m cm 12  54 $\times  8$ = 100  32 $= 100  mm{m} 32  mm{cm}$	(d) 35. 734 g $\times$ 9 = 321.606 kg 321 kg 606 g
(e) 15. $345 l$ $\times 12$ = 184.14 l	(f) 75 32 m $\times$ 14 = 1054 48 m = 1054.48 m

### 4. Divide the following :

(a)  $32 \text{ m } 36 \text{ cm } \text{by } 4 = 32.36 \text{ m} \div 4$ 8.09 = 8.09 m  $3 \overline{) 32.36} \text{ or } 8 \text{ m } 9 \text{ cm}$  -32 = 036 -36 = 0

118



(b) $481640 \text{ ml by } 8 = 48.6401 \div 8$
6.080 = 6.0801
3 48.640 or 6180 ml
-48
064
$\frac{-64}{00}$
00
(c) $109 \text{ kg } 224 \text{ g by } 12 = 109.224 \text{ kg} \div 12$
9.102 = 9.102  kg
9.102 = 9.102  kg 12 $\sqrt{109.224} = 9 \text{ kg } 102 \text{ g}$
- 108
12
- 12
$\frac{-12}{024}$
$\frac{-24}{0}$
0
(d) 992.80 m by $4 = 992.80 \text{ m} \div 4$
248.20 = 248.20
4 992.80
- 8
$4 \overline{\smash{\big)}^{992.80}} \\ -\frac{8}{19}$
<u>-16</u>
32
$\frac{-32}{08}$
$\frac{-8}{00}$
(e) $950.391$ by $7 = 950.391 \div 7$
$\frac{135.77}{100000000000000000000000000000000000$
7) 950.39
$\frac{-7}{25}$
-21_
$\frac{-21}{40}$
35
-53
49
- 49
0
(f) 340.80 kg by 15 = 340.80 kg $\div$ 15
135.77 = 22.72  kg
15 340.80
40
<u>-30</u>
108
$\frac{-105}{20}$
30 - 30
- 30

0

Sol	ve the following :		I		
	Kiran walked in the morning	= 3 1	km		
	She walked in the evening		00 m		
		= (4	000÷	1000	) km
		= 4 1	km		
So,	the total distance she covered =				7 km
	Thus, the distance covered by	Kiran	is 7 k	cm.	
		k	m		m
(b)	Rohit's father travelled by bus	= 1	15		875
	He travelled by car	= 1	14		609
	He travelled on foot	= +			208
	Total distance he travelled	= 13	31		692
	Thus, the total distance travel	lled b	y Roh	nit's fa	ather is
	131 km 692 m		k		g
(c)	Quantity of biscuits in tin		= 1	6	000
	Biscuits I gave to my sister		= -	9	050
	Biscuits left with me		=	6	950
	Thus, 6 kg 950 g of biscuits is	left w	vith m	e.	
			kg		g
(d)	Quantity of tomatoes	=	0		250
	Quantity of onion	=	1		250
	Quantity of potatoes Total quantity of vegetables	= -	+ 5		125
	Total quality of vegetables	=	6		625
			c	. 1 1	
(e)	Therefore, I purchased 6 kg 62 Priya bought milk on Sunday	25 g 0	i vege	etable	s.
(0)	She bought milk on Monday		=	2.	850 <i>l</i>
	Total quantity of milk she bou	ght	=		025 <i>l</i>
	Thus, Priya bought 5.875 l of i	-	=	5.	875 <i>l</i>
(f)	Milkman delivers milk to the b	butter	factor	ry	
	He sells milk to people				
	Quantity of milk used to make	pane	er		
	Total quantity of use milk		ml		
	=	6	250		
	= 23	3	725		
	= + 35	5	137		
	= 65	5	112		
				l	ml
			= 10		000
	Quantity of milk the milkman	has	= - (		112
	Total quantity of used milk			34	888
	Quantity of milk left with him Thus, 34 <i>l</i> 888 ml of milk is le				
	$1100, 5 \pm i 000 \text{ III 01 IIIIK IS IC}$	·ii (VII)			
(g)	The thickness of a book $= 3$ cm			.5 cm	1
	The height of the nile of such '	25  ho	oks		

- The height of the pile of such 25 books = Thickness of a book  $\times$  25
  - $= 3.5 \text{ cm} \times 25$
  - $= 3.5 \text{ cm} \times 2$ = 87.5 cm

$$= 0.875 \text{ m}$$

Thus, the height of the pile of 25 such books will be 0.875 m.

5.



(h) The length of the jogging track = 1.5 km $= (1.5 \times 1000) \text{ m}$ = 1500 m Anil has to jog on this track 8 times. So, the total distance Anil jogged  $= 1500 \text{ m} \times 8$ = 12000 mThus, the total distance Anil jogged is 12,000 m

(i) The quantity of shampoo the bottle holds = 1 l 140 ml

$$= (1 \times 1000) \text{ ml} + 140 \text{ ml}$$
  
= 1000 ml + 140 ml  
= 1140 ml

The quantity of shampoo I use in a week = 95 ml So, the number of weeks till the shampoo will last

$$\begin{array}{rcl} 12 & = 1140 \div 95 \\ 95 \overline{\smash{\big)}\,1140} & = 12 \\ \underline{-95} \\ \underline{-95} \\ 190 \\ \underline{-190} \\ 0 \end{array}$$

Thus, the shampoo will last in 12 weeks.

(j) Total quantity of sugar the 4 persons shared = 44.860 kgSo, the quantity of sugar each of them got 11 215

$$= (44.860 \div 4) \text{ kg}$$

$$= 11.215 \text{ kg}$$

$$= 11.215 \text{ kg}$$

$$= \frac{4}{04}$$

$$= \frac{-4}{04}$$

$$= \frac{-4}{06}$$

$$= \frac{-4}{06}$$

$$= \frac{-4}{20}$$

$$= \frac{-4}{20}$$

$$= \frac{-4}{06}$$

Thus, each of the persons got 11.215 kg of sugar.

- (k) The weight of 5 packets of the biscuits = 6.125 kg The weight of 1 packet of the biscuits =  $(6.125 \div 5)$  kg = 1.225 kg
  - The weight of 3 packets of the biscuits =  $(1.225 \times 3)$  kg = 3.675 kg

$$\begin{array}{r}
1.225 \\
-5 \\
-5 \\
11 \\
-10 \\
12 \\
-10 \\
25 \\
-25 \\
0
\end{array}$$

So, 3 packets of the
biscuits will weigh 3.675 kg.

### 1. Convert :

```
(a) 47.39 \text{ km} = (47.39 \times 10) \text{ hm}
                         = 473.9 hm
                         = 473 \text{ hm} + 0.9 \text{ hm}
                         = 473 \text{ hm} + (0.9 \times 100) \text{ m}
                         = 473 \text{ hm} + 90 \text{ m}
                         = 473 \text{ hm } 90 \text{ m}
(b) 4.89 \text{ kg} = 4 \text{ kg} + 0.89 \text{ kg}
                     = 4 \text{ kg} + (0.89 \times 1000) \text{ g}
                     = 4 \text{ kg} + 890 \text{ g}
                     = 4 \text{ kg } 890 \text{ g}
(c) 4.091
                     = (4.09 \times 10) \text{ dl}
                     = 40.9 \text{ dl}
                     = 40 \text{ dl} + 0.9 \text{ dl}
                     = 40 \text{ dl} + (0.9 \times 10) \text{ cl}
                     = 40 \text{ dl} + 9 \text{ cl}
                     = 40 \text{ dl } 9 \text{ cl}
(d) 312.5 \text{ dm} = (312.5 \div 10) \text{ m}
                        = 31.25 m
                        = (31.25 \div 10) \text{ dam}
                        = 3.125 \text{ dam}
(e) 9.73 dg = (9.73 \div 10) g
                     = 0.973 g
                     = (0.973 \div 100) \text{ hg}
                     = 0.00973 hg
(f) 3069 \text{ ml} = 3000 \text{ ml} + 69 \text{ ml}
                     = (3000 \div 1000) 1 + 69 \text{ ml}
                     = 31 + 69 ml
```

062

2. The taxi covers in 24 days = 8646.24 km It covers in 1 day  $= (8646.24 \div 24) \text{ km}$ = 360.26 km360.26 It covers in 15 days  $= (360.26 \times 15)$  km 24) 864.24 = 5403.90 km 360.26 75  $\times 15$ 144 180130 144 +360260

= 540390	
	<u>= 5 4 0 3 9 0</u>

Thus, the distance covered in 15 days is 5403.9 km.

kα

σ

		ⁿ S	ъ
3.	The weight of potatoes	= 14	725
	The weight of tomatoes	= + 9	370
	Total weight	= 24	095



Total weight of potatoes, tomatoes and onionsgTotal weight of potatoes and tomatoes $\mathbf{kg}$  $\mathbf{g}$ The weight of the onion= 36050Thus, the weight of onions is= 2409511 kg 955 g or 11.955 kg.= +11955

 The quantity of milk The quantity of syrup Total quantity of mixture The mixture filled in 154 bottles

	l	ml
=	248	347
=	129	725
= +	- 378	070
=	378.	070 <i>l</i>

The mixture filled in 1 bottle =  $(378.070 \div 154) l$  2.455  $154 \int 378.070$  -308 700 -616 847 -770 770 -7700

Thus, 2 l 455 ml of mixture is filled in each bottle.

Exercise 13.1

- 1. Write the time shown in the clock : (a) 3:35 (b) 10:20
- 2. Fill in the blanks with a.m. or p.m. :
  - (a) 2:00 a.m. (b) 8:30 a.m.
    - (c) 10:00 a.m. (d) 2:00 a.m.
  - (e) 3:45 p.m.
- 3. Number of the days between 5th February to 28th February = 24

The number of days between 1st March to 31st March = 31The number of days between 1st April to 10th April = 10The total number of days between 5th February and 10th April

= (24 + 31 + 10) days = 65 days

- The boys goes to bed at 10 p.m. He sleeps for 8 hours. The time when he will get up = 10 p.m. + 8 hours = 12:00 midnight + 6 hours = 6:00 a.m. Thus, the boy will get up at 6:00 a.m.
- 5. The train left Ranchi at 8:30 p.m. and reached Kolkata at 6:30 a.m.

The time taken to complete the journey to

12:00 midnight to 8:30 p.m.

= 3:30 hours

And 12:00 night to 6:30 a.m. = 6:30 hours The total time taken to complete the journey = (3:30 + 6:30) hours = 10:00 hours

Thus, the time taken to complete the journey is 10 hours.

6. The time shown in the clock = 12:05The clock is fast by 15 minutes. The correct time =  $12:05 \ 00:15$ = 11:50

Thus, the correct time is 11:50.

Exercise 13.2

### 1. Change into minutes :

- (a) 1 hour = 60 minutes
  - 7 hours =  $(60 \times 7)$  minutes = 420 minutes
- (b) 1 hour = 60 minutes 15 hours =  $(60 \times 15)$  minutes = 900 minutes
- (c) 1 hour = 60 minutes
  - 19 hours 10 minutes = 19 hours +10 minutes
    - $= (19 \times 60)$  minutes + 10 minutes
    - = 1140 minutes + 10 minutes
  - = 1150 minutes
- (d) 1 hour = 60 minutes
  - 6 hours 40 minutes = 6 hours +40 minutes
    - = (6 × 60) minutes + 40 minutes
    - = 360 minutes + 40 minutes
    - = 400 minutes
- (e) 1 hour = 60 minutes
  - 11 hours =  $(11 \times 60)$  minutes
    - = 660 minutes
- (f) 2.8 hours =  $(2.8 \times 60)$  minutes
  - = 168.0 minutes
  - = 168 minutes

### 2. Change into seconds :

(a)	1 minute	= 60 seconds
	33 minutes	$=(33 \times 60)$ seconds
		= 1980 seconds

- (b) 1 minute = 60 seconds
  - 14 minutes 40 seconds = 14 minutes + 40 seconds =  $(14 \times 60)$  seconds + 40 seconds
    - = 840 seconds + 40 seconds
    - = 880 seconds
- (c) 1 minute = 60 seconds 59 minutes =  $(59 \times 60)$  seconds = 3540 seconds
- (b) 1 minute = 60 seconds 60 minutes 13 seconds = 60 minutes + 13 seconds =  $(60 \times 60)$  seconds + 13 seconds = 3600 seconds + 13 seconds = 3613 seconds
- (e) 1 minute = 60 seconds 5.3 minutes =  $(5.3 \times 60)$  seconds = 318 seconds
- (f) 1 minute = 60 seconds
- 9.6 minutes =  $(9.6 \times 60)$  seconds = 576 seconds



### 3. Convert into hours and minutes :

(a) 1 hours  $\underbrace{60 \overline{108}}_{-60} \text{ Answer : } 108 \text{ minutes} = 1 \text{ hour } 48 \text{ minutes}$ 

(b)  $\frac{14 \text{ hours}}{60 840}$   $\frac{-60}{240}$ Answer: 840 minutes = 14 hours  $\frac{-240}{0} \rightarrow \text{minutes}$ 

(c)  $13 \rightarrow$  hours <u>60</u> 788 <u>-60</u> Answer: 788 minutes <u>188</u> = 13 hours 8 minutes <u>-188</u> <u>0</u>  $\rightarrow$  minutes (d) <u>60</u> 615

<u>- 6</u>00 <u>15</u>  $\rightarrow$  minutes **Answer :** 615 minutes = 10 hours 15 minutes  $8 \rightarrow hours$ (e)  $60 \overline{)} 520$ _480  $40 \rightarrow$  minutes **Answer**: 520 minutes = 8 hours 40 minutes  $16 \rightarrow hours$ (f) 60) 1000 - 60 400 Answer: 1000 minutes - 360 = 16 hours 40 minutes  $40 \rightarrow \text{minutes}$ 

### 4. Convert into minutes and seconds :

(a)	$5 \rightarrow \text{minutes}$ $60) 325 - 300$	
	$\frac{300}{25}$ $\rightarrow$ seconds	Answer : 325 seconds = 5 minutes 25 seconds
(b)	$60 \xrightarrow{6} 381$ $- 360$	
	$21 \rightarrow \text{seconds}$	Answer: 381 seconds 6 minutes 21 seconds
(c)	$6 \rightarrow \text{minutes}$ $60 \overline{) 360}$ $- 360$	
		$\mathbf{r}$ : 360 seconds = 6 minutes
(d)	$\underbrace{9 \rightarrow \text{minutes}}_{60) 585}$	
	$\frac{-540}{45} \rightarrow \text{seconds}$	<b>Answer :</b> 585 seconds = 9 minutes 45 seconds

(e) 
$$\frac{6 \rightarrow \text{minutes}}{-\frac{360}{56}}$$
  $\rightarrow \text{ seconds}$  Answer : 416 seconds  
= 6 minutes 56 seconds  
(f)  $\frac{4 \rightarrow \text{minutes}}{57}$   $\rightarrow \text{seconds}$  Answer : 297 seconds  
= 4 minutes 57 seconds  
So, he takes to type 80 words in 1 minute = 60 seconds  
So, he takes to type a word =  $\frac{60^3}{80_4}$  seconds =  $\frac{3}{4}$  seconds  
Thus, the typist takes 3/4 seconds to type a word.  
(f)  $2\frac{1}{2}$  hours = 2 hours +  $\frac{1}{2}$  hours = (2×60) minutes +  $\frac{1}{2}$   
= 60 minutes  
= 120 minutes + 30 hours minutes  
= 150 minutes  
So, both periods are equal.  
(f) The person walks 3 km in in 1 hours = 60 minutes.  
So, time taken to walk 1 km =  $\frac{60}{3}$  minutes = 20 minutes.  
Thus, the time taken to walk 1 km is 20 minutes.  
Thus, the time taken to walk 1 km is 20 minutes.

Add : (a) Mins Secs 46 39 [(39+45) secs = 84 secs +29 45 = 1 min + 24 secs]

 $\begin{array}{cccc} 27 & 38 \\ \hline 08 & 15 \\ \hline \end{array} \begin{array}{c} 75 & secs = 1 & min + 15 & secs \\ \hline (1 + 40 + 27) & mins \\ = 68 & mins \\ = 1 & hour + 8 & mins \\ \end{array}$ 

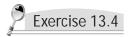
122

10



(e)	Days Hou	ırs				Y	<i>ears</i>	Montl 12 + 5	hs
(e)	8 20				(d)		48	(17)	
	+ 6 21		[(20+21)  hours = 41 = 1 day + 17 hours]				49 20	⁄5 10	[We borrow 1 year.
	15 17	-				- 1		10	$1 \times 12 + 5 = 17$ months]
							19	07	[49 - 1 = 48  years]
(f)	Years Mo	onths				Mo	onths	Days 20 + 30	
	30 5		[(5+8)  months = 13  months =		(e)		14	50	
	+ 19 8	_	1 year + 1 month]				15	20 25	[We borrow 1 month.
	50 1	-				- 1		25	$1 \times 30 + 20 = 50$ days]
(g)	Days Ho	urs					)2	25	[15 - 1 = 14  months]
	① 12 16		[(16 + 15)  hours = 31  hours]			Ye	ears N	Aonths	5
	+ 13 15		[(10 + 15) hours = 51 hours] = 1 day + 7 hours]		(0)		35	12 + 4 (16)	-
	26 07	_			(f)		36	4	
		_				-	18	10	[We borrow 1 year. $1 \times 12 + 4 = 16$ months]
(h)	Years Mont	th Day:	S				17	06	[36 - 1 = 35  years]
	$\begin{array}{ccc} \textcircled{1} & \textcircled{1} \\ 6 & 5 \end{array}$	17	[(17 + 25) days = 42 days						
	+ 2 8	25	= 1  month + 12  days			Μ	~	Years	
	9 2	12			(g)		(14) J⁄5	(30) (90)	
			1 14 4 10 4			-	12	15	[We borrow 1 month $=$ 30 days].
			hs = 14 months = 12 months ear + 2 months]			_	02	15	[15 - 1 = 14  months]
(i)	YearsMont	hSecs				Year	s Mor	thsDay	vs
(1)	① 12 29	03				8	12 (1)	30	
	+ 14 36	40	[(29 + 36)  mins = 65  mins = 1  hour + 5  mins]		(h)	9	00	00	
	27 05	43			+	- 6	07	29	We borrow 1 year from 9 years.
~ -		10			-	2	04	01	9-1 = 8 years] [1 year = 12 months. We borrow 1
Sub (a)	otract : Mins Se	ecs							month from 12 months.
	61 (	70 LO	[We borrow 1 min. $1 \times 60 + 10 = 70$ sees]						12 - 1 = 11  months] [1 month = 30 days]
		29	$1 \times 60 + 10 = 70$ secs] [ $62 - 1 = 61$ mins]	3.				es for	-
		41			кад	nav	studie Hr	s M	Ins [We borrow 1 hour.
							(1	) (7	⁺¹⁵ $1 \times 60 + 15 = 75$ minutes] [2 - 1 = 1 hour]
(b)	12	Secs 108	[We borrow 1 min.				Ž	Í Ì	5
		48	$1 \times 60 + 48 = 108$ secs]				- 1	4	15
		56	[13 - 1 = 12  mins]				0	3	80
	7	52						studies	
(c)	Mins S	Secs		4	-	-		and by .	30 minutes.
		55	= 8 hours 18 minutes	4.	Dog	your	self		
	00	07							

- 32



### 1. Find the duration of time :

(a) Duration from 7:15 a.m. to 12:00 noon = 4 hours 45 minutes

Duration from 12:00 noon to 1:25 p.m. = 1 hour 25 minutes

Total time = 4 hours 45 minutes + 1 hour 25 minutes = 6 hours 10 minutes

(b) Duration from 8:30 a.m. to 12:00 noon = 3 hours 30 minutes

Duration from 12:00 noon to 7:50 p.m. = 7 hours 50 minutes

Total time = 3 hours 30 minutes + 7 hours 50 minutes = 11 hours 20 minutes

(c) Duration from 4:10 p.m. to 12:00 midnight = 7 hours 50 minutes

Duration from 12:00 midnight to 3:15 a.m. = 3 hours 15 minutes

Total time = 7 hours 50 minutes + 3 hours 15 minutes = 11 hours 5 minutes

(d) Duration from 7:50 p.m. to 12:00 midnight = 4 hours 10 minutes

Duration from 12:00 midnight to 10:30 a.m. = 10 hours 30 minutes

Total time = 4 hours 10 minutes + 10 hours 30 minutes = 14 hours 40 minutes

2. The boy sleeps from 9:30 p.m. to 12:00 midnight = 2 hours 30 minutes
He sleeps from 12:00 midnight to 6:30 a.m. = 6 hours 30

minutes Total time = 2 hours 30 minutes + 6 hours 30 minutes = 9

hours

Thus the boy sleeps for 9 hours

- 3. Number of days from 7-2-2014 to 28-2-2014 = (28 6) days = 22 days
  - Number of days from 1-3-2014 to 31-12-2014

=[365(31 + 28)] days= [365 - 59] days = 306 days

Number of days from 1-1-2015 to 31-12-2015 = 365 days

Total days = (22 + 306 + 365) days = 693 days

Now, we need (1000 - 693) = 307 days in 2016 to complete the period of depositing the money.

In 2016, January = 31 days

February	=	29 days
March	=	31 days
April	=	30 days
May	=	31 days
June	=	30 days
July	=	31 days
August	=	31 days
September	=	30days
October	=	31 days
Total	=	305 days
Up to $2-11-2016 = 2$ days		
Total = 307 days		
d of 1000 days of deposit		

So, the period of 1000 days of deposit of money will be completed on 2-11-2016.

Therefore, the man can withdraw his money on 3-11-2016.

4. Number of days of tour in March = (31 - 2) days = 29 days

Number of days needed in April = (45 - 29) days = 16 days

So, Vaishali's tour completed on 16-4-2014 Therefore, Vaishali will return on 17-4-2014.

### 5. What time will be :

- (a) Changing 8:15 a.m. to 24 hour clock time = 08:15 hours
  Required time = 8 hours 15 minutes + 6 hours 25 minutes = 14 hours 40 minutes = 14:40 hours
  So, the required time will be 14:40 hours or 2:40 p.m.
  (b) 95 minutes = 60 minutes + 35 minutes = 1 hour 35
- minutes Required time = 10:30 a.m. + 1 hour 35 minutes

So, the required time will be 12:05 p.m.

### 6. What was the time :

- (a) Required time = 12:10 p.m. -1 hour 17 minutes = 10:53 a.m.
  - So, the time was 10:53 a.m.
- (b) Required time = 12:00 midnight -2 hours 45 minutes = 9:15 p.m.

So, the time was 9:15 p.m.

- 7. Required time = 6:15 p.m.–1 hour 40 minutes = 4:35 p.m. Therefore, the match started at 4:35 p.m.
- 8. Changing 7:45 p.m. to 24 hour clock time = 19:45 hours Time required = 19:45 hours -10 hours 15 minutes = 09:30 hours = 9:30 a.m.

So, the train began its journey at 9:30 a.m.

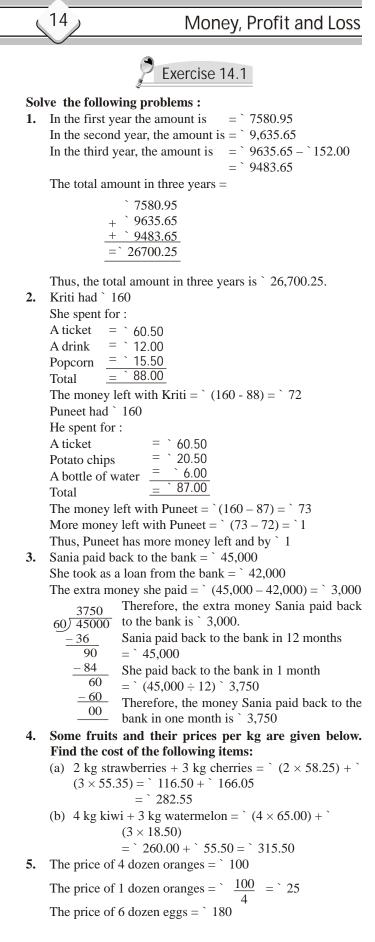
## Exercise 13.5

- 1. What is the boiling point of water in :
  - (a) 100 degree celsius or  $100^{\circ}$ C.
  - (b) 212 degree Fahrenheit or 210°F.
- 2. What is the freezing point of water in :
  - (a) 0 degree Celsius or  $0^{\circ}$ C.
  - (b) 32 degree Fahrenheit or  $32^{\circ}$ F.
- **3.** Find the difference in maximum and minimum temperature for each place :
  - (a) Delhi : (40.2 32) °C = 8.2 °C
  - (b) Kolkata : (36 29.8) °C = 6.2 °C
  - (c) Chennai : (43 34.7) °C = 8.3 °C
  - (d) Mumbai : (35 31.3) °C = 3.7 °C
- 4. The decrease in temperature =  $79^{\circ}$ C  $43^{\circ}$ C

```
= 36^{\circ}C
```

5. Normal body temperature =  $98.6^{\circ}F$ Raj's body temperature =  $103.5^{\circ}F$ Higher degrees of Raj's temperature =  $103.5^{\circ}F - 98.6^{\circ}F$ =  $4.9^{\circ}F$ 

So, 4.9 degree of Fahrenheit Raj's body temperature is higher than the normal body temperature.



The price of 1 dozen eggs =  $\frac{180}{6}$  =  $\frac{30}{6}$ 

The cost of 1 dozen oranges + 1 dozen eggs = 25 + 30= ` 55

So, Sonu spends Rs 55. Sonu gives ` 100 to the shopkeeper. So, he gets back = 100 - 55 = 45Thus, the amount Sonu gets back is  $\ge 45$ .

1.

## Exercise 14.2

- Find out which is better to buy: (a) The cost of 11 chocolates = 55 The cost of 1 chocolate =  $\frac{55}{11} = 524 \frac{5.50}{132.00}$ 5.50 - 120 The cost of 24 chocolates = 132 120 The cost of 1 chocolate =  $\frac{132}{24}$  = Rs 5.50  $\frac{120}{-120}$ 00 ` 5.00 < Rs 5.50 So, it is better to buy 11 chocolates for Rs 55. (b) The cost of 21 milk = 40The cost of 1 l milk =  $\frac{40}{2}$  = Rs 20 The cost of 5 l milk = 97.50The cost of  $11 \text{ milk} = \frac{97.50}{5} = 19.50$ 19.50 < Rs 20.00 ` 19.50 < Rs 20.00 So, it is better to buy 51 milk for > 97.50. (c) The cost of 12 pens = 120.00The cost of 1 pen =  $\frac{120.00}{12} = 10.00$ The cost of 15 pens = 136.50 =  $\frac{136.50}{15}$  = 9.10The cost of 1 pen Rs 9.10 < ` 10.00 So, it is better to buy 15 pens for ` 136.50 (d) The cost of 5 glasses of juice = 75 The cost of 1 glass of juice  $=\frac{75}{5}$  = 15 The cost of 15 glasses of juice = 240 The cost of 1 glass of juice  $= \frac{240}{15} = 16$ `15<`16 So, it is better to buy 5 glasses of juice for 75. (e) The cost of 6 erasers = 13.20 The cost of 1 eraser =  $\frac{13.20}{6} = 2.20$   $\frac{8}{-16}$ 20 The cost of 8 erasers = 18 - 16 The cost of 1 eraser =  $\frac{18}{8} = 2.25$ 40 ` 2.20 < ` 2.25 -40So, it is better to buy 6 erasers for Rs 13.20. __0 2. The cost of 8 kg rice is ` 240. What is the price of : (a) The cost of 1 kg of rice =  $\frac{240}{8} = 30$ 
  - (b) The cost of  $\frac{5}{2}$  kg of rice =  $\left(\frac{30 \times 5}{2}\right) = 75$ (c) The cost of  $\frac{25}{3}$  kg of rice =  $\left(\frac{25}{3} \times 30\right) = 250$



3. The price of 5 l of refined oil = 407.50The price of 1 l of refined oil =  $\frac{407.50}{5} = 81.50$ The price of 9 l of refined oil =  $(81.50 \times 9) = 733.50$ So, the price of 91 of refined oil is 733.50. 4. The cost of 5 chairs = 1,200The cost of 1 chair  $=\frac{1200}{5} = \text{Rs } 240$ The cost of 2 chairs =  $(240 \times 2) = 480$ So, the cost of 2 chairs is ` 480. 5. The cost of 8 notebooks = 280 The cost of 1 notebook =  $\frac{280}{8} = 35$ The cost of 9 notebooks =  $(35 \times 9) = 315$ Thus, Vicky paid Rs 315 for the notebooks. 6. The cost of 500 bricks =`2,500 =  $\frac{2500}{500}$  = 5The cost of 1 brick The cost of 15,000 bricks =  $(5 \times 15000) = 75,000$ So, Ritesh paid > 75,000 for the bricks. Exercise 14.3

### 1. Find the S.P. when :

- (a) S.P. = C.P. + Profit = (800 + 50) = 850(b) S.P. = C.P. - Loss = (1,000 - 80) = 920
- (c) S.P. = C.P. + Profit = (615 + 35) = 650
- (d) S.P. = C.P. Loss = (1800 400) = 1,400
- (e) S.P. = C.P. + Profit = `(970 + 140) = `1,110
  (f) S.P. = C.P. Loss = `(1100 170) = `930
- 2. Find the C.P. when:
  - (a) C.P. = S.P. Profit = (800 90) = 710(b) C.P. = S.P. + Loss = (970 + 125) = 1,095(c) C.P. = S.P. + Loss = (618 + 120) = 738(d) C.P. = S.P. + Loss = (1500 + 200) = 1,700(e) C.P. = S.P. – Profit = (1270 - 225) = 1,045(f) C.P. = S.P. + Loss = (2100 + 350) = 2,450
- 3. Find the profit or loss in the following:
  - (a) Here, C.P. < S.P. So, there is a profit. Profit = S.P. - C.P. = `(740 - 650) = `90
  - (b) Here, S.P. < C.P. So, there is a loss. Loss = C.P. - S.P. = `(1100 - 837) = `263
  - (c) Here, S.P. < C.P. So, there is a loss. Loss = C.P. - S.P. = `(370 - 265) = `105
  - (d) Here, S.P. < C.P. So, there is a loss. Loss = C.P. - S.P. = `(1900 - 1600) = `300
  - (e) Here, C.P. < S.P. So, there is a profit. Profit = S.P. - C.P. = (500 - 430) = 70
  - (f) Here, C.P. < S.P. So, there is a profit. Profit = S.P. - C.P. = (2875 - 2600) = 275
- 4. Here, the cost of the radio (C.P.) = `900, Profit = `80 S.P. = C.P. + Profit = `(900 + 80) = `980 So, the selling price of the radio is `980.
- Here, C.P. = `370 and S.P. = `450 Profit = S.P. - C.P. = `(450 - 370) = `80 Thus, the profit is `80.

- 6. Here, C.P. = `125, Profit = `25 S.P. = C.P. + Profit = `(125 + 25) = `150 Thus, the selling price is `150.
- Here, C.P. = `42,500 and Loss = `1,280
  S.P. = C.P. Loss = `(42,500 1280) = `41,220
  Therefore, the selling price of motorcycle is `41,220.
- 8. Here, S.P. = `138 and Profit = `27 C.P. = S.P. - Profit = `(138 - 27) = `111 Thus, the cost price is `111.
- 9. Here, S.P. = `2,35,700 and Profit = `27,350 C.P. = S.P. - Profit = `(235700 - 27350) = `2,08,350 Therefore, Kamal bought the house at `2,08,350.
- **10.** Here, S.P. < C.P. So, there is a loss. Loss = C.P. - S.P. = ` (9850 - 8780) = ` 1,070 Thus, the loss is ` 1,070.

### 1. Find the profit per cent when :

- (a) Profit = S.P. C.P. = (500 400) = 100Profit% =  $\frac{\text{Profit}}{\text{C.P}} \times 100 = \frac{100}{400} \times 100 = 25\%$
- (b) Profit = S.P. C.P. = `(700 600) = `100 Profit% =  $\frac{\text{Profit}}{\text{C.P}} \times 100 = \frac{\cancel{100}}{\cancel{600}} \times \cancel{100} = \frac{50}{\cancel{3}}\%$ or 16.66% or 16.7%
- (c) Profit = S.P. C.P. = `(850 800) = `50 Profit% =  $\frac{\text{Profit}}{\text{C.P}} \times 100 = \frac{50^{25}}{800_{84}} \times 100 = \frac{25}{4}\%$ or 6.25%
- (d) Profit = S.P. C.P. = (1600 1500) = 100Profit% =  $\frac{100}{1500} \times 100 = \frac{20}{3}\% = \%$  or 6.666% or 6.67%

### 2. Find the loss per cent when :

(a) Loss = C.P. - S.P. = `(180 - 150) = `30 Loss% =  $\frac{\text{Loss}}{\text{C.P}} \times 100 = \frac{.30^{-1}}{.480^{-6}_{63}} \times 100^{-6} = \frac{.50}{.3}\%$ or 16.66% or 16.7%

(b) Loss = C.P. – S.P. = ` (840 – 800) = ` 40  
Loss% = 
$$\frac{\text{Loss}}{\text{C.P}} \times 100 = \frac{40^{-1}}{.840^{-1}} \times 100 = \frac{100}{21}\%$$
  
or 4.76% or 4.8%

(c) Loss = C.P. - S.P. = (650 - 500) = 150Loss% =  $\frac{Loss}{C.P} \times 100 = \frac{150^3}{.650_{13}^2} \times 100 = \frac{300}{13}\%$ or 23.07% or 23.1%

(d) Loss = C.P. - S.P. = ` (900 - 750) = ` 150  
Loss% = 
$$\frac{\text{Loss}}{\text{C.P}} \times 100 = \frac{15\theta^1}{900} \times 100^{-50} = \frac{50}{3}\%$$
  
or 16.7%

- 3. Find the profit or loss when :
  - (a) Profit = C.P. × Profit% =  $300 \times 10\%$

$$=$$
 300 ×  $\frac{10}{100}$  = 30

(b) Profit  $= C.P. \times Profit\%$ =  $800 \times \frac{8}{100} = 64$ 

(c) Loss = C.P. × Loss%  
= 
$$600 \times \frac{5}{100} = 30$$
  
(d) Loss = C.P. × Loss%

$$=$$
 1,000  $\times \frac{10}{100} =$  100

4. Profit = S.P. - C.P. = ` (400 - 300) = ` 100  
Profit% = 
$$\frac{\text{Profit}}{\text{C.P}} \times 100 = \frac{100}{3003} \times \overset{1}{100} = \frac{100}{3} \% = 33.3\%$$

- 5. Profit = S.P. C.P. = (200 150) = 50Profit% =  $\frac{\text{Profit}}{\text{C.P}} \times 100 = \frac{20}{200} \times 100 = 10\%$
- 6. Loss = C.P. S.P. = (200 180) = 20Loss% =  $\frac{\text{Loss}}{\text{C.P}} \times 100 = \frac{20^{-1}}{200_{10}} \times 100 = 10\%$
- **7.** Profit =  $C.P. \times Profit\%$ = 110  $\times$  100 = 11
  - S.P. = C.P. + Profit = (110 + 11) = 121
- 8. Here, C.P. < S.P. So, there is a profit.
- Profit = S.P. C.P. = (150 130) = 20Profit% =  $\frac{\text{Profit}}{\text{C.P}} \times 100 = \frac{2\theta^2}{43\theta_{13}} \times 100 = 15.3\%$ 9. Profit = C.P. × Profit% =  $800 \times \frac{20}{100} = 160$ S.P. = C.P. + Profit = (800 + 160) = 960

Therefore, the toy- shop owner sell the toy car at the price of `960

**10.** S.P. of 40 sarees = `4,800  
S.P. of 1 saree = `
$$\frac{4800}{40}$$
 = `120  
Profit on 1 saree = `20

The cost of 1 saree = S.P. – Profit = R(120 - 20) = 100

Revision 1. Tick  $(\checkmark)$  the correct option : (a) Answer: (i) 250 $[(160 + 30 \times 3) = (160 + 90) = 250]$ (b) Answer : (ii) ` 350  $[(70 \times 5) = 350]$ (c) Answer: (i) 1200 [C.P. = S.P. Profit = (1500 - 300) = 1,200](d) Answer : (iv) ` 80 [Cost of 4 kg rice = 40Cost of 1 kg rice = 404 = 10 Cost of 8 kg rice =  $(10 \times 8) = \text{Rs } 80$ ] = 232.60 2. Cost of apples 179.25 Cost of grapes <u>= +` 246.75</u> Cost of mangoes 658.60 Total cost Renuka gave to shopkeeper 700.00 658.60 She bought the fruit for 41.40 Balance money Thus, the money Renuka got back is ` 41.40 3. Cost of 1 dozen (= 12) glasses = 180Cost of 1 glass =  $\frac{180}{12}$  = 15Cost of 1 dozen (= 12) cups = 60Cost of 1 cup =  $\frac{60}{12} = 5$ Renuka spent on glasses =  $\frac{1}{3}$  of  $270 = \frac{1}{3} \times 270 = 90$ 15 is the cost of = 1 glass • 90 is the cost of =  $\frac{90}{15}$  glasses = 6 glasses Remaining money =  $\frac{2}{3}$  of  $270 = \frac{2}{3} \times 270 = 180$ 5 is the cost of = I cup 180 is the cost of  $=\frac{180}{5}$  cups = 36 cups Therefore, Smita bought 6 glasses and 36 cups. Total cost of the 250 books =  $250 \times 25 = 6250$ So, C.P. = ` 6250 S.P. of 110 books =  $110 \times 30 = 3300$ S.P. of (250 - 110) = 140 books  $= 140 \times 22 = 3080$ So, total S.P. of 250 books = (3300 + 3080) = 6380Here, S.P. > C.P. So, there is a profit Profit = S.P. - C.P. = (6380 - 6250) = 130Thus, the profit on the whole transaction is 130 **5.** C.P. of 20 buckets = 1,200C.P. of 1 bucket = = 60Profit on 1 bucket = 15.50S.P. of 1 bucket = C.P. of 1 bucket + Profit on 1 bucket = (60.00 + 15.50) = 75.50Thus, the selling price of each bucket is > 75.50.

4.



- 6. (a) 1 worker saves in 1 month = `30
  20 workers saves in 1 month = `(30 × 20) = `600
  Thus, the group collects `600 each month.
  - (b) Money collected in 1 month = ` 600 Money collected in 1 year (= 12 month)
    = ` (600 × 12) = ` 7200

Money collected in 10 years =  $(7200 \times 10)$ = 72,000

Thus, ` 72,000 will be collected in ten years.

Exercise 15.1

- 1. Do yourself
- 2. Complete the following patterns :

(a) 
$$10 + 15 = 25 = 5 \times 5$$
  
 $15 + 21 = 36 = 6 \times 6$   
 $21 + 28 = 49 = 7 \times 7$   
(b)  $\frac{3 \times 5}{2} = 6 = 1 + 2 + 3$   
 $\frac{4 \times 5}{2} = 10 = 1 + 2 + 3 + 4$   
 $\frac{5 \times 6}{2} = 15 = 1 + 2 + 3 + 4 + 5$ 

**3.** Look at the pattern and fill in the blanks :

(a) 1 + 3 + 5 + 7 + 9 = 25

- (b) 1+3+5+7+9+11+13+15=64
- (c) 1+3+5+7+9+11+13+15+17+19=100



### 1. Complete the given magic squares :

(a)	10	17	12	(b)	53	48	49
	15	13	11		46	50	54
	14	9	16		51	52	47

- 2. Put a tick  $(\checkmark)$  on the palindrome :
  - (a) LEVEL  $\checkmark$  (b) MALAYALAM  $\checkmark$
  - (e) GOD SAW I WAS DOG.  $\checkmark$
  - (g) NO LEMONS NO MELON.
- 3. Change the given numbers to palindromes numbers :
  - (a)  $27 \rightarrow 27 + 72 = 99$
  - (b)  $48 \rightarrow 48 + 84 = 132$
  - 132 + 231= 363
  - (c)  $69 \rightarrow 69 + 96 = 165$ 
    - $\begin{array}{rrrr} 165 + 561 &= 726 \\ 726 + 637 &= 1363 \end{array}$ 
      - 1363 + 3631 = 4994
  - (d)  $\rightarrow 283 + 382 = 665$

$$665 + 566 = 1231$$

1231 + 1321 = 2552

- $\begin{array}{rcl} \text{(e)} & \rightarrow & 572+275=847\\ & 847+748=1595\\ & 1595+5951=7546\\ & 7546+6457=14003\\ & 14003+3041=44044 \end{array}$
- (f)  $\rightarrow 57 + 75 = 132$ 132 + 231 = 363
- (g)  $\rightarrow 13 + 31 = 44$
- (h)  $\rightarrow$  119 + 911 = 1030 1030 + 301 = 1331
- 4. Solve with the help of clues to find the secret number : Clue 1 : It is less than half of 100.

[Secret number  $<\frac{100}{2}$  or 50]

**Clue 2 :** It is more than 2 tens [Secret number > 20 and Secret numbers < 30]

and less than 3 tens.

Clue 3 : Its tens digit is 5 less than.

The ones digit and the sum of the digits is 9.

$$[7 - 2 = 5 \text{ and } 2 + 7 = 9]$$

Thus, the secret number is 27.

Do yourself

erns

Do yourself

Exercise 16.1

1. The data given below shows the numbers of students and the hours spent in doing homework per day : Draw a tally chart based on the data and answer the questions given below :

Tally chart caps

Hours	Tally Marks (Students)	No. of Students
1.		13
2.		23
3.	¥	7
4.		2
5.	Total	45

- (a) The maximum time spent per day in doing homework is 4 hours.
- (b) 23 students spent 2 hours per day studying.
- (c) There are 45 students in the class.

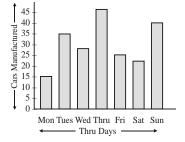
- (d) 13 students spent minimum hours studying.
- (e) The minimum hours spent per day for study is 1 hour.
- 2. Result of marks scored out of a maximum of 100 marks in a mathematics test are given below. Prepare a pictograph for the given data and answer the following questions :

Marks	Tally Marks (Students)	No. of Students
100	$\bigcirc$	1
92	000	3
91	$\bigcirc \bigcirc \bigcirc$	3
85	0000	4
80	0000	4
70	0000000	7
65	000	3
0	is for 1 students Total	25 Students

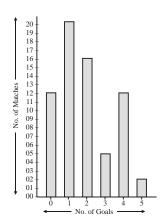
- (a) The highest marks scored in the test is <u>100</u>.
- (b) 7 students secured more then  $\underline{85}$ .
- (c) 25 students gave the test.
- (d) Only 1 student scored the maximum marks.

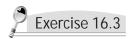


- 1. Look at the bar graph and answer the following questions :
  - (a) (i) Mountain A (b) (iv) 9000 M
  - (c) (iv) Mountain D
- 2. Construct a bar graph on the following data :



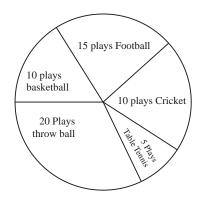
3. Draw a bar graph to represent the number of goals scored by the school football team : BAR GRAPH





1. In a class of 60 students, 15 play football, 10 play cricket, 5 play table. tennis 20 play throw ball and 10 play basketball. Draw a circle graph for the data given above.





2. The circle graph shows a survey of what 48 children did in their free time. Study the graph and answer the following questions :

(a) 
$$\frac{1}{3}$$
 of  $48 = \frac{1}{3} \times 48 = 16$ . So, 16 children played with

friends.

- (b)  $\frac{1}{8}$  of  $48 = \frac{1}{8} \times 48 = 6$ . So, 6 children watched T.V.
- (c)  $\frac{1}{4}$  of  $48 = \frac{1}{4} \times 48 = 12$ . So, 12 children watched

movie.

(d) 
$$\frac{1}{6}$$
 of  $48 = \frac{1}{6} \times 48 = 8$ . So, 8 children read a book.



Exercise 17.1

### 1. Find the average of the following sets :

(a) The sum of given numbers = 23 + 15 + 18 + 20 = 76Total number of addends = 4Average of the given number  $= \frac{76}{4}$ 

Thus, the average of the given number is 19.

(b) The sum of the given numbers = 6 + 10 + 12 + 14 + 15 = 57

Total number of addends = 5 Average of the given number  $\frac{57}{5} = 11\frac{2}{5} = 11.4$ 

Thus, the average of the given numbers = 11.4



(c) The sum of the given fractional number =  $\frac{1}{3} + \frac{1}{2} + \frac{5}{6} + \frac{1}{9}$ 

		<b>2 2 0</b>
2	, 3, 2, 6, 9,	= 6+9+15+2
	, 3, 1, 3, 9,	- 18
3	, 1, 1, 1, 3,	$=\frac{32}{18}=\frac{16}{9}$
	1, 1, 1, 1,	-

Total number of addends = 4 Average of the given fractional numbers =

$$\frac{16}{9} \div 4 = \frac{16}{9} \times \frac{1}{4} = \frac{4}{9}$$

Thus, the average of the given fractional numbers  $=\frac{4}{9}$ 

(d) The sum of the given numbers = 60 + 75 + 80 + 90 + 95 = 400

Total number of addends = 5 Average of the given numbers  $\frac{400}{5} = 80$ Thus, the average of the given numbers is 80.

(e) The sum of the given numbers = 4.5 + 2.5 + 3.7 + 4.8= 15.5

Total numbers of addends = 4 Average of the given numbers =  $\frac{15.5}{4}$  = 3.875 Thus, the average of the given numbers is 3.875.

(f) The sum of given amounts

$$= (5.60 + 12.25 + 6.50 + 30.50)$$
$$= 54.85$$

Total numbers of addends = 4 Average of the given amounts =  $\frac{54.85}{4} = 13.71$ Thus, the average of the given amounts is 13.71

2. The sum of first eight natural numbers

$$= 1 + 2 + 3 + 4 + 5 + 6 + 7 + 8$$
$$= 36$$

Total numbers of addends = 8 Average of first eight natural numbers =  $\frac{36}{8} = 4.5$ 

- Thus, the average of first eight natural numbers is 4.5**3.** Even numbers between 20 and 30 = 22, 24, 26, 28
  - The sum of the even numbers between 20 and 30

$$= 22 + 24 + 26 + 28 = 100$$

Total numbers of addends = 4 Average of the even numbers =  $\frac{100}{4}$  = 25 Thus, the average of the even numbers between 20 and 30 is 25.

4. The sum of the ages of the children in the group

$$= (7 + 11 + 8 + 10 + 14)$$
 years

Total numbers of addends = 5

Average age of the children years =  $\frac{50}{5}$  = 10 years.

Thus, the average age of the children in the group is 10 years.

5. The sum of the runs scored by the cricketer = (80 + 55 + 81 + 10 + 11) runs

= 237 runs

Total numbers of addends = 5

Average score of the cricketer =  $\frac{237}{5}$  = 47.4 runs

Thus, the average score of the cricketer in 5 casecutive matches is 47.4 runs per match.

6. The sum of the numbers = 240 Total number of addends = 8 Average of the numbers =  $\frac{240}{8}$  = 30.

Thus, the average of the 8 numbers is 30.

- 7. The sum of the numbers = 627 Total numbers of addends = 10 Average of the numbers =  $\frac{627}{10} = 62.7$
- 8. Ths sum of the marks got by Ishaan

$$= (17 + 25 + 14 + 10 + 24)$$
 marks  $= 90$  marks

Total numbers of addends = 5

Å

Average of the marks = 
$$\frac{90}{5}$$
 marks = 18 marks

Thus, the average of Ishaan's marks is 18.

9. The total number of the students who attended school in first week = 38 + 42 + 39 + 42 + 40 + 37 = 238

Total numbers of addends = 6 Average attendance of the students =  $\frac{238}{6}$ = 39.666 or 39.67

Thus, the average attendance of students in that week was 39.67.

- 10. Given below is a table showing marks obtained by 5 students in 4 subjects in the annual examination.Answer the following questions :
  - (a) Prerna gets total marks = (72 + 80 + 65 + 90) marks = 307 marks Average marks scored by Prerna = 307/4 marks = 76.75 marks Harsh gets total marks = (80 + 85 + 64 + 76) marks = 305 marks

Average marks scored by Harsh = 305/4 marks = 76.25 marks

- Reeta gets total marks = (78 + 84 + 78 + 49) marks = 289 marks
- Average marks scored by Reeta = 289/4 marks = 72.25
- Pawan gets total marks = (90 + 78 + 72 + 58) marks = 298 marks

Average marks scored by Pawan = 298/4= 74.5 marks Tanya gets total marks = (76 + 91 + 81 + 83) marks

= 331 marks

Average marks scored by Tanya = 331/4 = 82.75 marks



(b) Tanya's performance is the best as her average marks are more than others.

- 11. Average of three numbers = 10So, the sum of three numbers =  $10 \times 3 = 30$ The sum of two numbers = 12 + 10 = 22So the third number = 30 - 22 = 8
- **12.** Average of five numbers = 50

So, the sum of five numbers =  $50 \times 5 = 250$ 

The sum of four numbers = 53 + 48 + 64 + 44 = 209

So, the fifth number = 250 - 209 = 41

- **13.** Average of 5 numbers = 2 So, the total of these numbers =  $5 \times 2 = 10$
- 14. Average weight of 3 books = 500 g So, the total weight of these books =  $(500 \times 3)g = 1500g$ .