READ INDIA

Mathematics

Teacher's Manual

Class IV

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Chapter 1 : Revision

1. (a) Two thousand eighty six
(b) Three thousand nine hundred forty two.

2. (a) 8426 (b) 3039

3. (a) 4000 + 200 + 30 + 6 (b) 7000 + 200 + 50 + 9

4. (a) 3309, 3319, 3329 (difference of 10)
(b) 1300, 1350, 1400 (difference of 50)
(c) 2600, 2800, 3000 (difference of 200)

5. (a) 1000 (b) 5000 (c) 9999
(d) 5900 (e) 3999

6. (a) 4689 (b) 5790

7. (a) 128, 326, 425, 729 (b) 1809, 1845, 1880, 1886

8. (a) 7248, 4279, 3374, 3267
(b) 8875, 8748, 8674, 8475

9. (a) 3269 (b) 2133

10. (a) 4300 (b) 9999

11.

	Place Value	Face Value
(a)	200	2
(b)	80	8

12. (a) 8077, 8078, 8079 (b) 9864, 9865, 9866
(c) 7998, 7999, 8000 (d) 4880, 4881, 4882

13. (a)
$$\begin{array}{r} 3\,2\,6\,7 \\ 4\,2\,7\,9 \\ +\,1\,2\,4\,8 \\ \hline 8\,7\,9\,4 \end{array}$$
(b)
$$\begin{array}{r} 4\,8\,5\,9 \\ 2\,2\,4\,1 \\ +\,2\,3\,7 \\ \hline 7\,3\,3\,7 \end{array}$$
(c)
$$\begin{array}{r} 7\,2\,3\,4 \\ 3\,2\,6 \\ +\,7\,8 \\ \hline 7\,6\,3\,8 \end{array}$$

14. (a)
$$\begin{array}{r} 6\,7\,5\,4 \\ -\,3\,2\,7\,8 \\ \hline 3\,4\,7\,6 \end{array}$$
(b)
$$\begin{array}{r} 8\,6\,2\,8 \\ -\,5\,4\,3\,8 \\ \hline 3\,1\,9\,0 \end{array}$$

15. (a) 7 (5 + 1 + 1) (b) 9 (10 – 1)
(c) 10 + 1 + 1 = 12 (d) 10 + 10 + 1 + 1 = 22

(e) $10 + 10 + 10 + 1 + 1 + 1 = 33$

(f) $10 + 10 + 10 + (10 - 1) = 39$

(g) $50 - 10 = 40$ (h) $10 + 10 + 5 + 1 + 1 + 1 = 28$

16. (a) $\frac{4}{11} + \frac{5}{11} = \frac{4+5}{11} = \frac{9}{11}$

(b) $\frac{7}{31} + \frac{6}{31} = \frac{7+6}{31} = \frac{13}{31}$

(c) $\frac{4}{15} - \frac{1}{15} = \frac{4-1}{15} = \frac{3}{15}$

(d) $\frac{17}{18} - \frac{14}{18} = \frac{17-14}{18} = \frac{3}{18}$

17. (a) $\frac{3}{9} \boxed{>} \frac{2}{9}$ (b) $\frac{8}{17} \boxed{<} \frac{12}{17}$ (c) $\frac{3}{8} \boxed{>} \frac{3}{18}$

(d) $\frac{6}{15} \boxed{>} \frac{6}{19}$ (e) $\frac{15}{29} \boxed{<} \frac{15}{20}$

(f) $\frac{2}{4} \boxed{=} \frac{3}{6}$ $\left(\frac{1}{2} = \frac{1}{2}\right)$

18. (a) $\frac{1}{2}$ (b) $\frac{3}{5}$ (c) $\frac{5}{13}$ (d) $\frac{9}{19}$

19. (a)

₹	P
15	35
+ 19	25
34	60

(b)

₹	P
125	35
10	80
+ 155	15
291	30

(c)

₹	P
347	20
20	75
+ 13	25
381	20

20. (a)

₹	P
55	60
− 37	25
18	35

(b)

₹	P
79	40
− 25	50
53	90

(c)

₹	P
302	10
− 28	55
273	55

21. (a)

₹	P
5	. 15
×	8
41	. 20

(b)

₹	P
10	. 10
×	5
50	. 50

(c)

₹	P
251	. 35
×	8
2010	. 80

22. (a) $5\overline{)30.40}(6.08$
-30
040
-040
$\times$
₹ 6.08 p.

(b) $9\overline{)54.27}(6.03$
-54
027
027
$\times$
₹ 6.03 p

(c) $8\overline{)64.32}(8.04$
-64
032
032
$\times$
₹ 8.04 p.

23. (a) $200 \times 5 = 1000$ (b) $426 \times 10 = 4260$

(c) $729 \times 8 = 5832$ (d)
216
$\times 14$
864
$216\times$
3024

(e) $6\overline{)1005}(201$
-10
005
-005
00

(f) $10\overline{)3670}(367$
-30
067
-060
070
-070
0

24. Do yourself.

25. (a) February (b) 31 days (c) July, August
(d) 365, 366 (e) 52

26. $4047 + 5 = \underline{4052} + 5 = \underline{4057} + 5 = \underline{4062}$
$4062 + 5 = \underline{4067} + 5 = \underline{4072} + 5 = \underline{4077}$
$4077 + 5 = \underline{4082}$

27. 9881 (9 > 8 > 1) **28.** 1034

29.
No. of apple trees 1245
No. of mango trees 2367
No. of orange trees + 3075
Total no. of trees in or chand =

30.
Difference of two numbers 7839
Smaller number − 1796
Larger number

31. Cost of a washing powder ₹ 100 . 25

Cost of 8 packets × 8

₹ 802 . 00

32. Total money collected

Money contributed by each = 6307 ÷ 7

$$7\overline{)6307}(901$$
$$-63$$
$$0007$$
$$-0007$$
$$00$$

= ₹ 901

Chapter 2 : Roman Numerals

Exercise 2.1

1. (a) 35 = 10 + 10 + 10 + 5 = XXXV

(b) 42 = (50 – 10) + 1 + 1 = 40 + 1 + 1 = XLII

(c) 86 = (50 + 10 + 10 + 10 + 5 + 1)

(d) 79 = 50 + 10 + 10 + (10 – 1) = LXXIX

(e) 94 = (100 – 10) + (5 – 1) XCIV

(f) 8 = (50 – 10) + 5 + 1 + 1 + 1 XLVIII

(g) 28 = 10 + 10 + 5 + 1 + 1 + 1 XXVIII

(h) 54 = 50 (5 – 1) LIV

(i) 99 = (100 – 10) + (10 – 1) XCIX

(j) 37 = 10 + 10 + 10 + 5 + 1 + 1 XXXVII

2. (a) XIX = 10 + (10 – 1) = 10 + 9 = 19

(b) XLVII = (50 – 10) + 5 + 1 + 1 = 40 + 7 = 47

(c) LXXXIII = 50 + 10 + 10 + 10 + 1 + 1 + 1 = 83

(d) XLVIII = (50 – 10) + 5 + 1 + 1 + 1 = 48

(e) XXVIII = 10 + 10 + 5 + 1 + 1 + 1 = 28

(f) LV = 50 + 5 = 55

(g) XCIX = (100 – 10) + (10 – 1) = 90 + 9 = 99

(h) XCII = (100 – 10) + 1 + 1 = 90 + 2 = 92

(i) XXXVII = 10 + 10 + 10 + 5 + 1 + 1 = 37

(j) LX = 50 + 10 = 60

3. c, d, f, h, i

4. (a) XLII (42) < LXII (62)
(b) XXVIII (28) < XXXIV (34)
(c) 36 > 35 (d) 29 < 31 (e) 94 < 99 (f) 65 > 45

Multiple Choice Questions

1. (c) lXVI **2.** (b) XCIX
3. (d) does not exist **4.** XIX + XXX = 19 + 30 = 49
(a) XLIX

Mental Math

1. (a) 48 + 28 = (76) = LXXVI (76)
(b) 56 – 7 = 49 < 50 (c) 9 × 6 = 54 = XLIV (54)
(d) 126 – 74 = 52 < LXXIX (79)
2. (a) Seven (b) V, L, D
3.

46	68	91	99	82
XLVI	LXVIII	XCI	XCIX	LXXXII

Chapter 3 : Number System

Exercise 3.1

1. (a) 4,378 (b) 67,948 (c) 8,43,729
(d) 59,48,485 (e) 67,48,354 (f) 4,86,728
(g) 9,54,55,673 (h) 8,66,74,005
2. (a) 38564 = Thirty eight thousand five hundred forty six
(b) 627485 = Six lakhs twenty seven thousand four hundred eighty five.
(c) 2835 = Two thousand eight hundred thirty five
(d) 6784237 = Sixty seven lakhs eighty four thousand two hundred thirty seven.
(e) 4853546 = forty eight lakhs fifty three thousand five hundred forty six
(f) 727438 = Seven lakhs twenty seven thousand four hundred thirty eight.
(g) 10835009 = One crore eight lakhs thirty five thousand and nine.
(h) 20045008 = Two crores forty five thousand and eight.

3. (a) 12,636 (b) 4,68,209 (c) 72,05,008
(d) 9,67,40,232 (e) 4,00,002

4. (a) 6,724 (b) 72,938 (c) 886,724
(d) 9,054,086 (e) 48,053,672 (f) 39,400,085
(g) 724,359,280 (h) 880,000,088

5. (a) Seven hundred twenty five thousand three hundred sixty four

(b) Eight hundred four thousand fifty eight

(c) Seven million nine hundred thousand eight hundred forty five

(d) Six million two hundred seventy two thousand nine hundred forty five

(e) Twenty two million four hundred forty five thousand six hundred eighty four

(f) Thirty four million three hundred fifty nine thousand eight hundred seventy six

(g) Four hundred twenty five million forty nine

(h) Seven hundred ninety four million three hundred forty eight thousand three hundred ninety five.

6. (a) 302,236 (b) 600,042
(c) 10,437,109 (d) 102,000,947

Exercise 3.2

1.	**Place Value**	**Face Value**
(a)	20000	2
(b)	7000	7
(c)	700000	7
(d)	4000000	4
(e)	20	2
(f)	10000000	1
(g)	1	1
(h)	0	0

2. (a) 3 6 7 4 8

8
40
700
6000
30000

(b) 3 1 2 6

6
20
100
3000

(c) 3 4 5 7 2 9

9
20
700
5000
40000
300000

3. (a) 39405 = 30000 + 9000 + 400 + 0 + 5

(b) 425367 = 400000 + 20000 + 5000 + 300 + 60 + 7

(c) 3245125 = 3000000 + 200000 + 40000 + 5000 + 100 + 20 + 5

(d) 80,90,809 = 8000000 + 0 + 90000 + 0 + 800 + 0 + 9

4. (a) 15294 (b) 230905 (c) 3946218

5.

	Predecessor	Successor
(a)	86547	86549
(b)	729148	729150
(c)	3867290	3867292

6. Place Value of 7 in 857308 = 7 0 0 0

Face Value = − 7

6 9 9 3

7. Place value of 7 = 7 0 0 0 0 0

Place Value of 9 = − 9 0 0

6 9 9 1 0 0

8. 20627, 20629, 20631, 20633, 20635, 20637, 20639, 20641, 20643

9. 84480, 84485, 84490, 8495, 84500, 84505

10. 9885, 9875, 9865, 9855, 9845, 9835, 9825, 9815,. 9805

11. (a) 9505 + 9 = 9514, 9523, 9532, 9541

(b) 42389 + 10 = 42399, 42409, 42419, 42429

(c) 69800 – 100 = 69700, 69600, 69500, 69400

Exercise 3.3

1. (a) < (b) > (c) <

(d) = (e) > (f) >

2. (a) 780, 4357, 9865, 29325, 32678

(b) 5674, 6395, 7943, 9876, 9886

(c) 555672, 565781, 790005, 790050, 5507806

3. (a) 105685, 99384, 77859, 35672, 34428

(b) 750762, 750672, 750276, 705972, 705672

(c) 453639, 452539, 450796, 450679, 425359

4. (a) 425927 (b) 865193 (c) 999194

5. 10489 **6.** 986540 **7.** 9865431 **8.** 405789

Multiple Choice Questions

1. (b) Six **2.** (d) 5 hundreds

3. (a) 9999 – 999 = 9000 **4.** (a) 1 (100, 000)

5. (b) ten thousands **6.** (a) 1 million – 9 thousands
10,00,000 – 9000 = 991000

Mental Math

1. (a) 89784 + 100 = 89884, 89984, 90084

(b) 70967 + 2000 = 72967, 74967, 76967

(c) 98585 + 10 = 98595, 98605, 98615

2.
$$\begin{array}{r} 9\,0\,0\,0\,0\,0\,0 \\ -\;\;6\,0\,0\,0\,0 \\ \hline 8\,9\,4\,0\,0\,0\,0 \end{array}$$

3.

	Indian	International
(a)	8,57,483	857,483
(b)	59,45,642	5,945,642
(c)	70,77,070	7,077,070

4.
$$\begin{array}{r} 800000 \\ +\ 700 \\ \hline 800700 \end{array}$$

5. (a) 7000 (b) 898688

(c) 5000 (d) 9999999 – 1 = 9999998

Chapter 4 : Addition

Exercise 4.1

1. (a)
$$\begin{array}{r} 42351 \\ +\ 43543 \\ \hline 85894 \end{array}$$

(b)
$$\begin{array}{r} 85674 \\ +\ 4213 \\ \hline 89887 \end{array}$$

(c)
$$\begin{array}{r} 43172 \\ 23513 \\ +\ 12311 \\ \hline 78996 \end{array}$$

(d)
$$\begin{array}{r} 32435 \\ 14320 \\ +\ 1132 \\ \hline 47797 \end{array}$$

(e)
$$\begin{array}{r} 371562 \\ +\ 513136 \\ \hline 884698 \end{array}$$

(f)
$$\begin{array}{r} 456789 \\ +\ 312210 \\ \hline 768999 \end{array}$$

2. (a)
$$\begin{array}{r} 32451 \\ 34214 \\ +\ 20003 \\ \hline 86668 \end{array}$$

(b)
$$\begin{array}{r} 45613 \\ 21305 \\ +\ 32050 \\ \hline 98968 \end{array}$$

(c)
$$\begin{array}{r} 234567 \\ 322210 \\ +\ 43112 \\ \hline 599889 \end{array}$$

(d)
$$\begin{array}{r} 6307 \\ 21402 \\ +\ 111000 \\ 2600 \\ \hline 141309 \end{array}$$

3. (a)
$$\begin{array}{r} 31206 \\ +\ 24230 \\ \hline 55436 \end{array}$$

(b)
$$\begin{array}{r} 322314 \\ +\ 434225 \\ \hline 756539 \end{array}$$

Exercise 4.2

1. (a)
$$\begin{array}{r} 43674 \\ +\ 27432 \\ \hline 71106 \end{array}$$

(b)
$$\begin{array}{r} 48476 \\ +\ 87548 \\ \hline 136024 \end{array}$$

(c)
$$\begin{array}{r} 34598 \\ 26742 \\ +\ 35623 \\ \hline 96963 \end{array}$$

(d) 57986 + 2405 + 30671 = 91062

(e) 256348 + 72839 + 5240 = 334427

(f) 469004 + 42831 + 53672 = 565507

2. (a) 74939 + 37225 + 29845 = 142009

(b) 243567 + 72984 + 9999 = 330806

(c) 189984 + 345678 + 248354 + 44 = 784060

(d) 44444 + 4440 + 34 + 8504 = 57422

3. (a) 6935 − 2469 − 247 = 9651

(b) 32829 − 13323 − 25145 = 71297

Exercise 4.3

1. No. of males in town 45672

No. of females in town + 35654

Total population of town 81326

2. Population of I block 32675

Population of II block 24754

Population of III block 37608

Population of IV block + 20505

Total Population of colony 115542

3. 367485 + 34245 = 401730

4. Price of sofa set = ₹ 35624

Price of Dining set = + ₹ 24725

Total money paid by Saurav ₹ 60349

5. Money deposited in bank ₹ 24567

Money deposited after 2 months + ₹ 36749

Total money deposited = ₹ 61316

6. No. of Books of Hindi 28567

No. of English books 45674

No. of Maths books + 5678

Total books in library = 79919

7. Ajay's income during 2011 ₹ 240000

Increase in income + ₹ 35680

Income in 2012 = ₹ 275680

Earning in I year ₹ 240000

Earning in II year + ₹ 275680

Total earning of Ajay = ₹ 515680

8. 85994 + 240885 = 326879

9. No. of Persons visited zoo on Sun 35678

No. of Persons visited zoo on Mon 45729

No. of Persons visited zoo on Tue + 32678

Total no. of persons visited zoo = 114085

10. 48326 + 85014 = 133340

Mental Math

1. (a) 1300 + 1500 = 1800 $\boxed{<}$ 25665

(b) 9770 $\boxed{>}$ 8922 (c) 6941 = 6941

2. (a) 2850 + $\boxed{150}$ = 3000 (3000 – 2850)

(b) 6500 + $\boxed{1400}$ = 7900 (7900 – 6500)

(c) 999 + $\boxed{19001}$ = 20000 (20000 – 999)

(d) 40000 + 580 + $\boxed{14105}$ = 54685 (54685 – 40580)

3. 586596 + 100000 = 686596

Chapter 5 : Subtraction

Exercise 5.1

1. (a) $\begin{array}{r} 87643 \\ -\,24512 \\ \hline 63131 \end{array}$ (b) $\begin{array}{r} 56943 \\ -\,32412 \\ \hline 24531 \end{array}$ (c) $\begin{array}{r} 73546 \\ -\,21432 \\ \hline 52114 \end{array}$

(d) $\begin{array}{r} 94834 \\ -\,33421 \\ \hline 61413 \end{array}$ (e) $\begin{array}{r} 864188 \\ -\,243005 \\ \hline 621183 \end{array}$ (f) $\begin{array}{r} 679238 \\ -\,245125 \\ \hline 434113 \end{array}$

2. (a) $\begin{array}{r} 62543 \\ -\,31212 \\ \hline 31331 \end{array}$ (b) $\begin{array}{r} 94586 \\ -\,42343 \\ \hline 52243 \end{array}$

(c) $\begin{array}{r} 95885 \\ -\,84553 \\ \hline 11332 \end{array}$ (d) $\begin{array}{r} 86743 \\ -\,42321 \\ \hline 44422 \end{array}$

3. (a) $\begin{array}{r} 583\boxed{4}65 \\ -\,1\boxed{4}1\,1\boxed{4}\boxed{0} \\ \hline 442325 \end{array}$ (b) $\begin{array}{r} 846735 \\ -\,436104 \\ \hline 410631 \end{array}$

Exercise 5.2

1. (a) $\begin{array}{r} 54327 \\ -\,26978 \\ \hline 27349 \end{array}$ (b) $\begin{array}{r} 92342 \\ -\,54568 \\ \hline 37774 \end{array}$ (c) $\begin{array}{r} 85863 \\ -\,42794 \\ \hline 43069 \end{array}$

(d) $\begin{array}{r} 42562 \\ -\,31998 \\ \hline 10564 \end{array}$ (e) $\begin{array}{r} 742634 \\ -\,84564 \\ \hline 658070 \end{array}$ (f) $\begin{array}{r} 485674 \\ -\,48935 \\ \hline 436739 \end{array}$

2. (a) $\begin{array}{r} 56742 \\ -\,39854 \\ \hline 16888 \end{array}$ (b) $\begin{array}{r} 86074 \\ -\,73928 \\ \hline 12146 \end{array}$

(c) $\begin{array}{r} 88453 \\ -\,35986 \\ \hline 52467 \end{array}$ (d) $\begin{array}{r} 359674 \\ -\,248996 \\ \hline 110678 \end{array}$

3. (a)
$$\begin{array}{r} 48321 \\ -\,25675 \\ \hline 22646 \end{array}$$

4.
$$\begin{array}{r} 945672 \\ -\,84567 \\ \hline 861105 \end{array}$$

5.
$$\begin{array}{r} 100000 \\ -\,55555 \\ \hline 44445 \end{array}$$

6. (a)
$$\begin{array}{r} 24356 \\ +\,35714 \\ \hline 60070 \end{array}$$

(b)
$$\begin{array}{r} 985327 \\ -\,60070 \\ \hline 925257 \end{array}$$

7. (a)
$$\begin{array}{r} 70000 \\ -\,16200 \\ \hline 53800 \end{array}$$

(b)
$$\begin{array}{r} 2400000 \\ -\,1314000 \\ \hline 1086000 \end{array}$$

8. (a)
$$\begin{array}{r} 79705 \\ -\,58300 \\ \hline 21405 \end{array}$$

(b)
$$\begin{array}{r} 200005 \\ -\,53467 \\ \hline 146538 \end{array}$$

Exercise 5.3

1. Rahul's earning per month ₹ 25560
His expenditure per month – ₹ 15780
His savings per month = ₹ 9780

2. Total money with Arpit ₹ 647000
Money spent on buying car – ₹ 586394
Money left with Arpit = ₹ 60606

3. Total milk produced = 50670 li
Milk supplied in one city = 25340
Milk supplied in second city = 17346
Total milk supplied = 25340 + 17346 = 42686 l
Milk left with dairy = 50670 – 42686 = 7984 litres

4. Total population of town 135748
No. of males = – 57894
No. of females = 77854

5. 80456 – 39984 = 40472

6. 72345 – 26745 = 45600

7. 89542 – 59382 = 30160

8. 75983 – 24536 = 51447

9. Cost of flat ₹ 9 8 4 3 0 0

Money with Rintu − ₹ 8 9 4 9 8 0

Money short with Rintu ₹ 8 9 3 2 0

10. Money deposited by suresh ₹ 9 4 5 6 7 4

Money with drawn by him − ₹ 8 6 5 3 8 4

Money left in bank a/c = ₹ 8 0 2 9 0

Multiple Choice Questions

1. (b) 9000 – 8753 = 247 **2.** (b) 50000 – 1 = 49999

3. (c) 21483 – 16483 = 5000

4. (c) 30451 – 4937 = 25514 **5.** (c) 7

Mental Math

1. (a) 3343 ⊵ 3334 (b) 14500 ⊜ 14500 (c) 6949 ⊴ 7039

2. 60000 – 28364 = 31636 **3.** 58642 – 777 = 57865

4. 62150 – 48461 = 13689 **5.** 73396 – 25489 = 47907

Chapter 6 : Multiplication

Exercise 6.1

1. (a) 145 × 1 = 145 (b) 6724 × 1 = 6724

(c) 2456 × 0 = 0 (d) 6984 × 0 = 0

2. (a) 95 (b) 984 (c) 984 (d) 3854

3. (a) 84 (b) 236 (c) 84

4. (a) 52 (b) 88 (c) 29

5. (a) 24500 (b) 84560

6. (a) 95 × 4 tens = 380 tens = 3800

(b) 845 × 2 hundreds = 1690 hundreds = 169000

7. (a) (4 × 38) × 28 (b) (5 × 20) × 69

152 × 28 = 4256 100 × 69 = 6900

(c) (8 × 5) × 76 (d) 45 × (125 × 4)

40 × 76 = 3040 45 × 500 = 22500

Exercise 6.2

1. (a)
$$\begin{array}{r} 847 \\ \times 28 \\ \hline 6776 \\ 1694\times \\ \hline 23716 \end{array}$$

(b)
$$\begin{array}{r} 4020 \\ \times 35 \\ \hline 20100 \\ 12060\times \\ \hline 140700 \end{array}$$

(c)
$$\begin{array}{r} 5678 \\ \times 98 \\ \hline 45424 \\ 51102\times \\ \hline 556444 \end{array}$$

(d)
$$\begin{array}{r} 674 \\ \times 124 \\ \hline 2696 \\ 1348\times \\ 674\times\times \\ \hline 83576 \end{array}$$

(e)
$$\begin{array}{r} 948 \\ \times 238 \\ \hline 7584 \\ 2844\times \\ 1896\times\times \\ \hline 225624 \end{array}$$

(f)
$$\begin{array}{r} 6974 \\ \times 248 \\ \hline 55792 \\ 27896\times \\ 13948\times\times \\ \hline 1729552 \end{array}$$

2. (a)
$$\begin{array}{r} 354 \\ \times 284 \\ \hline 1416 \\ 2832\times \\ 708\times\times \\ \hline 100536 \end{array}$$

(b)
$$\begin{array}{r} 459 \\ \times 355 \\ \hline 2295 \\ 2295\times \\ 1377\times\times \\ \hline 162945 \end{array}$$

(c)
$$\begin{array}{r} 725 \\ \times 242 \\ \hline 1450 \\ 2900\times \\ 1450\times\times \\ \hline 175450 \end{array}$$

(d)
$$\begin{array}{r} 8644 \\ \times 329 \\ \hline 77796 \\ 17288\times \\ 25932\times\times \\ \hline 2843876 \end{array}$$

(e)
$$\begin{array}{r} 1258 \\ \times 872 \\ \hline 2516 \\ 8806\times \\ 1006\times\times \\ \hline 1096976 \end{array}$$

(f)
$$\begin{array}{r} 2856 \\ \times 938 \\ \hline 22848 \\ 8568\times \\ 25704\times\times \\ \hline 2678928 \end{array}$$

(g)
$$\begin{array}{r} 2536 \\ \times 824 \\ \hline 10144 \\ 5072\times \\ 20288\times\times \\ \hline 2089664 \end{array}$$

(h)
$$\begin{array}{r} 3674 \\ \times 643 \\ \hline 11022 \\ 14696\times \\ 22044\times\times \\ \hline 2362382 \end{array}$$

(i)
$$\begin{array}{r} 2485 \\ \times 532 \\ \hline 4970 \\ 7455\times \\ 12425\times\times \\ \hline 1322020 \end{array}$$

Exercise 6.3

1. No. of apples in one box = 234
No. of apples in 155 boxes = 234 × 155 = 36270 apples

2. Weight of 1 box of rice = 95 kg
Weigh of 2345 boxes = 2345 × 95 = 222775 kg

3. Cost of one chair = ₹ 585
Cost of 729 chairs = 729 × 585 = ₹ 426465

4. Total students in school = 5345
Monthly dues paid by a student ₹ 480
Total dues paid by students / Total
Monthy collection = 5345 × 480 = ₹ 25,65,600

5. Cost of one LED ₹ 8948
Cost of 409 LED = 8948 × 409 = ₹ 36,59,732

6. Hours in one day = 24
Hours in the month of June = 24 × 30 = 720 hours.

7. Mobiles produced in 1 day = 389
Mobiles produced in 1 year
= 389 × 365 = 141985 mobiles

MCQ's

1. (c) 30 × 500 = 15000

2. (b) 100 (10 × 100 × 100 = 100000)

Chapter 7 : Division

Exercise 7.1

1. (a)
$$\begin{array}{r} 6\overline{)248}\,(41 \\ -24 \\ \hline 008 \\ -006 \\ \hline 002 \end{array}$$

(b)
$$\begin{array}{r} 8\overline{)729}\,(91 \\ -72 \\ \hline 009 \\ -008 \\ \hline 001 \end{array}$$

Q × Divisor + Remainder
= 41 × 6 + 2 = 248

91 × 8 + 1 = 729

(c) $3\overline{)945}(315$

-9

04

-03

15

-15

$\times$

$315 \times 3 = 945$

(d) $9\overline{)810}(90$

-81

00

$90 \times 9 + 0 = 810$

(e) $4\overline{)795}(198$

-4

39

-36

35

-32

3

$198 \times 4 + 3 = 795$

(f) $7\overline{)392}(56$

-35

42

-42

00

$56 \times 7 + 0 = 392$

(g) $8\overline{)3245}(405$

-32

0045

-0040

05

$405 \times 8 + 5 = 3245$

(h) $2\overline{)7263}(3631$

-6

12

-12

006

-006

$0\ 3$

$-\ 2$

1

$3631 \times 2 + 1 = 7263$

(i) $3\overline{)7279}(2426$

-6

12

-12

007

-006

19

18

01

$2426 \times 3 + 1 = 7279$

(j) $6\overline{)4895}(815$

-48

009

-006

035

-030

3

$815 \times 6 + 3 = 4895$

(k) $8\overline{)9843}(1230$

-8

18

-16

24

-24

3

$1230 \times 8 + 3 = 9843$

(l) $9\overline{)3865}(429$

-36

26

-18

85

-81

4

$429 \times 9 + 4 = 3865$

2. (a) $5\overline{)4279}(855$

-40

27

-25

29

-25

4

$855 \times 5 + 4 = 4279$

(b) $13\overline{)3868}(297$

-26

126

-117

098

-091

07

$297 \times 13 + 7 = 3868$

(c) $48\overline{)9893}(206$

-96

0293

-0288

005

$206 \times 48 + 5 = 9893$

(d) $18\overline{)748}(41$

-72

28

-18

10

$41 \times 18 + 10 = 748$

(e) $29\overline{)849}(29$

-58

269

-261

8

$29 \times 29 + 8 = 849$

(f) $34\overline{)5437}(159$

-34

203

-170

337

-306

31

$159 \times 34 + 31 = 5437$

(g) $25\overline{)8748}(349$

-75

124

-100

248

-225

23

$349 \times 25 + 23 = 8748$

(h) $38\overline{)6278}(165$

-38

247

-228

198

-190

08

$165 \times 38 + 8 = 6278$

(i) $44\overline{)8355}(189$

-44

395

-352

435

-396

39

$189 \times 44 + 39 = 8355$

(j) $39\overline{)45672}(1171$

-39

66

-39

277

-273

42

39

03

$1171 \times 39 + 3 = 45672$

(k) $74\overline{)32454}(438$

-296

285

-222

634

-592

42

$438 \times 74 + 42 = 32454$

(l) $54\overline{)79652}(1475$

-54

256

-216

405

-378

272

270

02

$1475 \times 54 + 2 = 7965$

3. Dividend = 4355 and Q = 65

Dividend × Quotient + Remainder = Dividend

$D \times 65 + 0 = 4355 \qquad D = \frac{4355}{65} = 67$

4. Q = 592 D = 39 R = 21

Dividend = (39 × 592) + 21

5. Q = 54, D = 24 R = 18

Dividend = (24 × 54) + 18 =

Exercise 7.2

1. (a) 486 ÷ 10

$$\begin{array}{r|l} 10 & 486 \\ -40 & 48 \\ \hline 86 & \\ -80 & \\ \hline 06 & \end{array}$$

Q = 48, R = 6

(b) 1459 ÷ 10

$$\begin{array}{r|l} 10 & 1459 \\ -10 & 145 \\ \hline 45 & \\ -40 & \\ \hline 59 & \\ -50 & \\ \hline 9 & \end{array}$$

Q = 145, R = 9

(c)

$$\begin{array}{r|l} 10 & 3245 \\ -30 & 324 \\ \hline 24 & \\ -20 & \\ \hline 45 & \\ -40 & \\ \hline 5 & \end{array}$$

Q = 324, R = 5

(d)

$$\begin{array}{r|l} 100 & 899 \\ -800 & 8 \\ \hline 099 & \end{array}$$

Q = 8, R = 99

(e)

$$\begin{array}{r|l} 100 & 3454 \\ -300 & 34 \\ \hline 0454 & \\ -0400 & \\ \hline 0054 & \end{array}$$

Q = 34, R = 54

(f)

$$\begin{array}{r|l} 100 & 45544 \\ -400 & 455 \\ \hline 554 & \\ -500 & \\ \hline 544 & \\ -500 & \\ \hline 44 & \end{array}$$

Q = 455, R = 44

(g)

$$\begin{array}{r|l} 1000 & 7294 \\ -7000 & 7 \\ \hline 294 & \end{array}$$

Q = 7, R = 294

(h)

$$\begin{array}{r|l} 1000 & 84544 \\ -8000 & 84 \\ \hline 4544 & \\ -4000 & \\ \hline 0544 & \end{array}$$

Q = 84, R = 544

(i)

$$\begin{array}{r|l} 1000 & 945678 \\ -9000 & 945 \\ \hline 4567 & \\ -4000 & \\ \hline 5678 & \\ -5000 & \\ \hline 678 & \end{array}$$

Q = 945, R = 678

Exercise 7.3

1. Total no. of trees = 9240

No. of trees in each row = 35

No. of rows = 9240 ÷ 5 = 1848 rows

2. Total distance covered by train in 24 hrs = 13488 km

Distance covered in 1 hour = 13488 ÷ 24 = 562 km

3. Total mangoes = 13579

No. of boxes = 37

No. of mangoes in each box = 13579 ÷ 37 = 367 mangoes

4. No. of guavas bought by fruit selles = 7 5 0 0

No. of guavas found rotten = − 1 0 0

guavas left = 7 4 0 0

No. of guavas packed in 40 boxes = 7400 ÷ 40 = 185 guavas

5. 4408 ÷ 58 = 76

6. Total crates to be loaded = 19422

No. of crates loaded in 1 truck = 78

No. of trucks required = 19422 ÷ 78 = 249 trucks

7. Total toffees to be distributed = 25555

No. of students = 95

No. of toffees each student get = 25555 ÷ 95 = 269 toffees

8. Total money with man = ₹ 2576

Money to be divided among 3 + 4 = 7 children

Money each child get = 2576 ÷ 7 = ₹ 368

9. 1 second = $\frac{1}{60}$ minutes

3240 seconds = $\frac{3240}{60}$ minutes = 54 minutes

10. 73585 ÷ 5 = 14717

MCQ 's

1.
$$\begin{array}{r} 11\overline{)\,11341\,(1031} \\ -11 \\ \hline 034 \\ -033 \\ \hline 011 \\ -011 \\ \hline \times \end{array}$$

Ans. (c) 1031

2. Largest 4 digit no = 9999
largest 2 digit no = 99

$$\begin{array}{r} 99\overline{)\,9999\,(101} \\ -99 \\ \hline 0099 \\ -0099 \\ \hline 000 \end{array}$$

Ans (c) 101

3.
$$\begin{array}{r} 15\overline{)\,495\,(33} \\ -45 \\ \hline 045 \\ -045 \\ \hline \times \end{array}$$

Ans. (b) 2

Mental Math

1. (a) repeated subtraction
(b) 0 (c) dividend

2. (a) $36 \div 18 = 2$ (b) $9000 \div 300 = 30$
(c) $72800 \div 70 = 1040$ (d) $36000 \div 18 = 2000$

Chapter 8 : Factors and Multiples

Exercise 8.1

1. (a) $63 = 1 \times 63 = 63$, $3 \times 21 = 63$, $7 \times 9 = 63$
1, 3, 7, 9, 21, 63

(b) $72 = 1 \times 72$, 2×36, 3×24, 4×18, 6×12, 8×9, 9×8, 12×6, 18×4, 24×3
Factors of 72 = 1, 2, 3, 4, 6, 8, 9, 12, 18, 24

(c) $56 = 1 \times 56$, 2×28, 4×14, 7×8, 8×7
Factors of 56 are = 1, 2, 4, 7, 8, 14, 28, 56

(d) $48 = 1 \times 48$, 2×24, 3×16, 4×12, 6×8, 8×6
Factors of 48 = 1, 2, 3, 4, 6, 8, 12, 16, 24, 48

(e) $108 = 1 \times 108, 2 \times 54, 3 \times 36, 4 \times 27, 6 \times 18, 9 \times 12$

Factors of 108 = 1, 2, 3, 4, 6, 9, 12, 18, 54, 108

(f) $144 = 1 \times 144, 2 \times 72, 3 \times 48, 4 \times 36, 6 \times 24,$
$8 \times 18, 9 \times 16, 12 \times 12$

Factors of 1, 2, 3, 4, 6, 8, 9, 12, 16, 18, 24, 36, 48, 72, 144.

(g) $92 = 1 \times 92, 2 \times 46, 4 \times 23, 23 \times 4$

Factors of 92 = 1, 2, 4, 23, 46, 92

(i) $74 = 1 \times 74, 2 \times 37$

Factors of 74 = 1, 2, 37, 74.

2. 5) 1225 (245
−10
022
−020
025
−025
00

5 divides 1225 exactly therefore 5 is a factor of 1225.

3. 18) 432 (24
−36
072
−072
00

18 divides 432 exactly It is factors of 432.

4. 29) 1305 (45
−116
145
−145
×

R = 0

Ans. Yes. 29 is a factor

5. 25) 245 (9
−225
020

R = 20

Ans. 25 is not a factor.

6. 73) 1251 (17
−73
0521
−0511
010

R = 10

Ans. 17 is not a factors.

7. $1 \times 108 = 108$
$2 \times 54 = 108$
$3 \times 36 = 108$
$4 \times 27 = 108$
$6 \times 18 = 108$
$9 \times 12 = 108$
Factors = 1, 2, 3, 4, 6, 9, 12, 18, 27, 36, 54, 108.

8. $1 \times 150 = 150$
$2 \times 75 = 150$
$3 \times 50 = 150$
$5 \times 30 = 150$
$6 \times 25 = 150$
$10 \times 15 = 150$
Factors = 1, 2, 3, 5, 6, 10, 15, 25, 30, 50, 75, 150.

9. $1 \times 54 = 54$
$2 \times 27 = 54$
$3 \times 18 = 54$
$6 \times 9 = 54$
Factors = 1, 2, 3, 6, 9, 18, 27, 54.
Greatest factor = 54

10. $1 \times 124 = 124$
$2 \times 62 = 124$
$4 \times 31 = 124$
Factors = 1, 2, 4, 31, 62, 124.
Smallest factor = 1

11. Find HCF

(a) 6 and 15

1×6 $\quad$ 1×15
2×3 $\quad$ 3×5
3×2 $\quad$ 5×3

Factors $\quad 6 = 1, 2, \textcircled{3}\, 6$
$15 = 1, \textcircled{3}, 5, 15 = \text{HCF} = 3$

(b) 13 and 39

13×1 $\quad$ 1×39
3×13

Factors $\quad 13 = 1, \textcircled{13}$
$39 = 1, 3, \textcircled{13} = \text{HCF} = 13$

(c) 21 and 35

Factors $\quad 21 = 1, 3, \textcircled{7}, 2, 1$
$35 = 1, 5, \textcircled{7}, 35$ HCF = 7

(d) 75 and 125

Factors 75 = 1, 3, 5, 15, (25), 75

125 = 1, 5, (25), 125 HCF = 25

(e) 46 and 84

Factors 46 = 1, (2), 23, 46

84 = 1, (2), 3, 4, 6, 7, 12, 14, 21, 28, 42, 84

HCF = 2

(f) 16 and 21

Factors 16 = (1), 2, 4, 8, 16

21 = (1), 3, 7, 21 HCF = 1

Exercise 8.2

1. (a) 4 = 4, 8, 12, 16 (b) 6 = 6, 12, 18, 24

(c) 9 = 9, 18, 27, 36 (d) 13 = 13, 26, 39, 52

(e) 15 = 15, 30, 45, 60 (f) 18 = 18, 36, 54, 72

(g) 22 = 22, 44, 66, 88 (h) 27 = 27, 54, 81, 108

2. (a) 20, 25, 30 (b) 28, 35, 42

(c) 44, 55, 66 (d) 76, 95, 114

3. (a) 22, 44, 66, 88, 110, 132, 154

4. (a) 19, 38, 57, 76, 95, 114, 133, 152, 171

5.
$$\begin{array}{r} 7\overline{)691}(98 \\ -63 \\ \hline 61 \\ -56 \\ \hline 5 \end{array}$$

R = 5

No, 691 is not a multiple of 7.

6.
$$\begin{array}{r} 4\overline{)184}(46 \\ -16 \\ \hline 24 \\ -24 \\ \hline \times \end{array}$$

R = 0

Yes, 184 is a multiple.

7.
$$\begin{array}{r} 34\overline{)7514}(221 \\ -68 \\ \hline 071 \\ -068 \\ \hline 034 \\ -034 \\ \hline \times \end{array}$$

R = 0

Ans. Yes.

8. LCM of.

(a) 6 and 8.

6 = 6, 12, 18, (24), 30, 36

8 = 8, 16, (24), 32, 40, 48; LCM = 24

(b) 7 and 21

7 = 7, 14, (21), 28, 35, (42)

21 = (21), (42), 63; LCM = 42

(c) 9 and 15

9 = 9, 18, 27, 36, (45)

15 = 15, 30, (45), 60; LCM = 45

(d) 13 and 39

13 = 13, 26, 39, 52, 65, (78)

39 = 39, (78), 117, 156; LCM = 78

(e) 3, 4 and 6

3 = 3, 6, 9, (12), 15, 18, 21

4 = 4, 8, (12), 16, 20

6 = 6, (12), 18, 24, 30; LCM = 12

(f) 10, 15 and 20

10 = 10, 20, 30, 40, 50, (60), 70

15 = 15, 30, 45, (60), 75

20 = 20, 40, (60), 80, 100; LCM = 60

Exercise 8.3

1. (a) 1 (b) 2 (c) 4 (d) 9

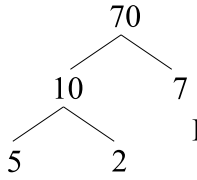
2. (a) 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37

3. (a) 41, 43, 47, 53, 59, 61, 67, 71, 73, 79

4. (a) 51, 52, 54, 55, 56, 57, 58, 60, 62, 63, 64, 65, 66, 68, 69, 70, 72, 74, 75, 76, 77, 78, 80, 81, 82, 84, 85, 86, 87, 88, 90, 91, 92, 93, 94, 95, 96, 98, 99

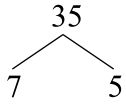
5. 5 and 3

6.



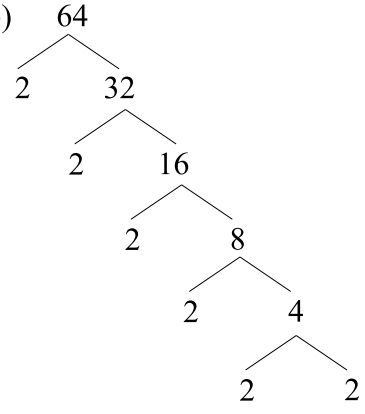
Prime factors 5, 2, 7

7. (a) 35



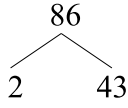
5×7

(b) 64



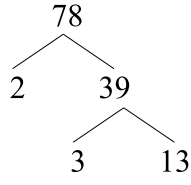
$2 \times 2 \times 2 \times 2 \times 2 \times 2$

(c) 86



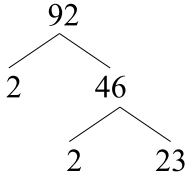
2×43

(d) 78



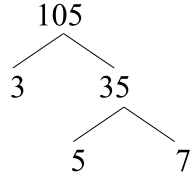
$2 \times 3 \times 13$

(e) 92



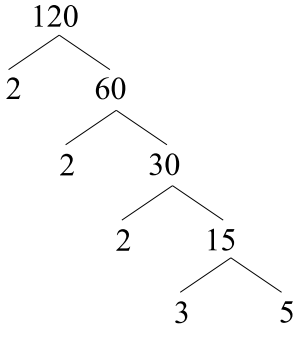
$2 \times 2 \times 23$

(f) 105



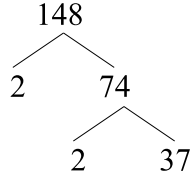
$3 \times 5 \times 7$

(g) 120



$2 \times 2 \times 2 \times 3 \times 5$

(h) 148



$= 2 \times 2 \times 37$

1. (d) 3972 (f) 3654 (g) 7246

even number last digit.

2. (a) 4236 = 4 + 2 + 3 + 6 = 15 – Yes

(b) 6573 = 6 + 5 + 7 + 3 = 21 – Yes

(c) 3425 = 3 + 4 + 2 + 5 = 14 – No

(d) 7224 = 7 + 2 + 2 + 4 = 15 – Yes

(e) 3242 = 3 + 2 + 4 + 2 = 11 – No

(f) 7265 = 7 + 2 + 6 + 5 = 20 – No

(g) 8604 = 8 + 6 + 0 + 4 = 18 – Yes

(h) 1243 = 1 + 2 + 4 + 3 = 10 – No

3. (a) 3265 (b) 3245 (g) 4260 (h) 8540

last digit is 5 or 0.

4. (a) 7855 No

(b) 10758 → 1 + 0 + 7 + 5 + 8 = 21 = Yes

(c) 14310 → 1 + 4 + 3 + 1 + 0 = 9 = Yes

(d) 12322 → 1 + 2 + 3 + 2 + 2 = 10 = Yes

(e) 8007 → No

(f) 3454 → 3 + 4 + 5 + 4 = 16 = No

(g) 5028 → 5 + 0 + 2 + 8 = 15 = Yes

(h) 4323 → No

5. (a) 689301 → 6 + 8 + 9 + 3 + 0 + 1 = 27 Yes

(b) 546327 → 5 + 4 + 6 + 3 + 2 + 7 = 27 Yes

(c) 73054 → 7 + 3 + 0 + 5 + 4 = 19 No

(d) 9306 → 9 + 3 + 0 + 6 = 18 Yes

(e) 45999 → 4 + 5 + 9 + 9 + 9 = 36 Yes

(f) 84567 → 8 + 4 + 5 + 6 + 7 = 30 No

(g) 3897 → 3 + 8 + 9 + 7 = 27 Yes

(h) 57123 → 5 + 7 + 1 + 2 + 3 = 18 Yes

6. (a) 13450 (d) 8250 (e) 67480 Unit digit is 0.

MCQ's

1. (c) 2 **2.** (a) 36 = 1 × 36, 2 × 18, 3 × 12, 4 × 9, 6 × 6 48 = 1 × 48, 2 × 24, 3 × 16, 4 × 12, 6 × 8

= 1, 2, 3, 4, 6, 9, (12), 18, 36

= 1, 2, 3, 4, 6, 8, (12), 16, 24, 48 (b) HCF = 12

3. (c) 1 itself **4.** 6 = 6, 12, 18, 24, 30, (36)

12 = 12, 24, (36), 48

18 = 18, (36), 54 (a) LCM = 36

Mental Math

1. (a) 54 = 1 × 54, 2 × 27, 3 × 18, 6 × 9

Factors = 1, 2, 3, 6, 9, 18, 27, 54

(b) 84 = 1 × 84, 2 × 42, 3 × 28, 4 × 21, 6 × 14, 7 × 12

Factors = 1, 2, 3, 4, 6, 7, 12, 14, 21, 28, 42, 84

(c) 146 = 1 × 146, 2 × 73

Factors = 1, 2, 73, 146

(d) 196 = 1 × 196, 2 × 98, 3 × 66, 4 × 49

Factors = 1, 2, 3, 4, 49, 66, 98, 196

2. (a) 25 = 1, (5), 25

40 = 1, 2, 4, (5), 8, 10, 20

Common factor = 5

(b) 36, 45

36 = 1, 2, (3), 4, 6, (9), 12 = 36

45 = 1, (3), 5, (9), 15, 45

3 and 9 are common factors.

(c) 30 = 1, 2, 3, 5, 6, 10, 15, 30

36 = 1, 2, 3, 4, 6, 9, 12, 36

Common factor = 2, 3, 6

(d) 28 = 1, 2, 4, 7, 28

42 = 1, 2, 3, 4, 6, 7, 42

Common factor = 2, 4, 7

3. (a) 9 and 12

9 = 1, (3), 9

12 = 1, 2, (3), 4, 12

HCF = 3

(b) 15 = 1, 3, (5), 15

25 = 1, (5), 25

HCF = 5

(c) 18 = 1, 2, 3, (6), 9, 18

24 = 1, 2, 3, 4, (6), 8, 12, 24

HCF = 6

(d) 20 = 1, 2, (4), 5, 10

28 = 1, 2, (4), 7, 28

HCF = 4

4. (a) 3 = 3, 6, 9, 12, (15)

5 = 5, 10, (15), 20, 25

LCM = 15

(b) 5 = 5, 10, 15, 20, 25, (30)

6 = 6, 12, 18, 24, (30)

LCM = 30

(c) 12 = 12, 24, (36), 48

18 = 18, (36), 54, 72

LCM = 36

(d) 2 = 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, (24)

6 = 6, 12, 18, (24)

8 = 8, 16, (24), 32, 40

LCM = 24

Chapter 9 : Fractions

Exercise 9.1

1. Do yourself **2.** Do yourself **3.** Do yourself

4. (a) 2/5 (b) 1/8 (c) 4/9 (d) 3/13

(e) 5/17 (f) 9/12 (g) 6/18 (h) 7/14

5. (b) Six - eighths (c) Four-fifteenths

(d) Seven-tweintieth

Exercise 9.2

1.

	Numerator	**Denominator**
(a)	3	7
(b)	6	8
(c)	2	9
(d)	4	11
(e)	6	15
(f)	11	34
(g)	14	29
(h)	19	42

2. (a) $\frac{4}{9}$ (b) $\frac{1}{7}$ (c) $\frac{16}{21}$ (d) $\frac{21}{34}$

(e) $\frac{26}{59}$ (f) $\frac{33}{39}$ (g) $\frac{15}{62}$ (h) $\frac{23}{42}$

3. (a) denominator (b) numerator (c) 19

(d) 39 (e) numerator, denominator

4. Do yourself

5. (a) $\frac{3}{5} = \frac{6}{10} = \frac{9}{15}$ $\frac{3}{5} \times \frac{4}{4} = \frac{12}{20}, \frac{15}{25}, \frac{18}{30}$

(b) $\frac{4}{8} \times \frac{4}{4} = \frac{16}{32}$, $\frac{4}{8} \times \frac{5}{5} = \frac{20}{40}$, $\frac{4}{8} \times \frac{6}{6} = \frac{24}{48}$

(c) $\frac{6}{10} \times \frac{4}{4} = \frac{24}{40}$, $\frac{6}{10} \times \frac{5}{5} = \frac{30}{50}$, $\frac{6}{10} \times \frac{6}{7} = \frac{36}{70}$

6. (a) $\frac{3}{7} \times \frac{2}{2} = \frac{6}{14}$, $\frac{3}{7} \times \frac{3}{3} = \frac{9}{21}$, $\frac{3}{7} \times \frac{4}{4} = \frac{12}{28}$

$\frac{3}{7} \times \frac{5}{5} = \frac{15}{35}$

(b) $\frac{6}{8} \times \frac{2}{2} = \frac{12}{16}$, $\frac{6}{8} \times \frac{3}{3} = \frac{18}{24}$, $\frac{6}{8} \times \frac{4}{4} = \frac{24}{32}$

$\frac{6}{8} \times \frac{5}{5} = \frac{30}{40}$

(c) $\frac{7}{9} \times \frac{2}{2} = \frac{14}{18}$, $\frac{7}{9} \times \frac{3}{3} = \frac{21}{27}$, $\frac{7}{9} \times \frac{4}{4} = \frac{28}{36}$

$\frac{7}{9} \times \frac{5}{5} = \frac{35}{45}$

(d) $\frac{4}{6} \times \frac{2}{2} = \frac{8}{12}$, $\frac{4}{6} \times \frac{3}{3} = \frac{12}{18}$, $\frac{4}{6} \times \frac{4}{4} = \frac{16}{24}$

$\frac{4}{6} \times \frac{5}{5} = \frac{20}{30}$

(e) $\frac{1}{5} \times \frac{2}{2} = \frac{2}{10}$, $\frac{1}{5} \times \frac{3}{3} = \frac{3}{15}$, $\frac{1}{5} \times \frac{4}{4} = \frac{4}{20}$

$\frac{1}{5} \times \frac{5}{5} = \frac{5}{25}$

(f) $\frac{9}{15} \times \frac{2}{2} = \frac{18}{30}$, $\frac{9}{15} \times \frac{3}{3} = \frac{27}{45}$, $\frac{9}{15} \times \frac{4}{4} = \frac{36}{60}$

$\frac{9}{15} \times \frac{5}{5} = \frac{45}{75}$

(g) $\frac{8}{25} \times \frac{2}{2} = \frac{16}{50}$, $\frac{8}{25} \times \frac{3}{3} = \frac{24}{75}$, $\frac{8}{25} \times \frac{4}{4} = \frac{32}{100}$

$\frac{8}{25} \times \frac{5}{5} = \frac{40}{125}$

(h) $\frac{11}{29} \times \frac{2}{2} = \frac{22}{58}$, $\frac{11}{29} \times \frac{3}{3} = \frac{33}{87}$, $\frac{11}{29} \times \frac{4}{4} = \frac{44}{116}$

$\frac{11}{29} \times \frac{5}{5} = \frac{55}{145}$

7. (a) $\frac{3}{5} \times \frac{5}{5} = \frac{15}{25}$ (b) $\frac{4}{8} \times \frac{7}{7} = \frac{28}{56}$

(c) $\frac{2}{7} \times \frac{3}{3} = \frac{6}{21}$ (d) $\frac{5}{10} \times \frac{10}{10} = \frac{50}{100}$

(e) $\frac{4}{9} \times \frac{8}{8} = \frac{32}{72}$ (f) $\frac{36}{45} \div \frac{9}{9} = \frac{4}{9}$

(g) $\frac{45}{70} \div \frac{5}{5} = \frac{9}{14}$ (h) $\frac{1}{9} \times \frac{9}{9} = \frac{9}{81}$

8. (a) $\frac{4}{8} \times \frac{9}{9} = \frac{36}{72}$ (b) $\frac{4}{8} \times \frac{6}{6} = \frac{24}{48}$

(c) $\frac{4}{8} \times \frac{8}{8} = \frac{32}{64}$ (d) $\frac{4}{8} \times \frac{5}{5} = \frac{20}{40}$

9. (a) $\frac{48}{72} \div \frac{6}{6} = \frac{8}{12}$ (b) $\frac{48}{72} \div \frac{4}{4} = \frac{12}{18}$

(c) $\frac{48}{72} \div \frac{8}{8} = \frac{6}{9}$ (d) $\frac{48}{72} \div \frac{24}{24} = \frac{2}{3}$

10. (a) $\frac{2}{5} \times \frac{18}{18} = \frac{36}{90}$ (b) $\frac{3}{9} \times \frac{12}{12} = \frac{36}{108}$

(c) $\frac{4}{6} \times \frac{9}{9} = \frac{36}{54}$ (d) $\frac{72}{36} \div \frac{2}{2} = \frac{36}{18}$

(e) $\frac{18}{7} \times \frac{2}{2} = \frac{36}{14}$ (f) $\frac{6}{11} \div \frac{6}{6} = \frac{36}{66}$

(g) $\frac{9}{13} \div \frac{4}{4} = \frac{36}{52}$ (h) $\frac{108}{72} \div \frac{3}{3} = \frac{36}{24}$

11. (a) $\frac{6}{15} \times \frac{12}{30} = \frac{6}{15} \times \frac{30}{12} = \frac{180}{180} =$ Yes

(b) $\frac{18}{72} \times \frac{9}{36} = \frac{18}{72} \times \frac{36}{9} = \frac{648}{378} =$ No

(c) $\frac{14}{12} \times \frac{16}{48} = \frac{14}{12} \times \frac{48}{16} = \frac{672}{192} =$ No

(d) $\frac{25}{36} \times \frac{5}{6} = \frac{25}{36} \times \frac{6}{5} = \frac{150}{180} =$ No

(e) $\frac{6}{8} \times \frac{21}{35} = \frac{6}{8} \times \frac{35}{21} = \frac{210}{168} =$ No

(f) $\frac{7}{31} \times \frac{14}{62} = \frac{7}{3} \times \frac{62}{14} = \frac{434}{434} =$ Yes

Exercise 9.3

1. b, c, d **2.** a, d

3. (a) $\frac{1}{5}, \frac{3}{6} = \frac{1}{5} \times \frac{6}{6}, \frac{3}{6} \times \frac{5}{5} = \frac{6}{30}, \frac{15}{30}$

(b) $\frac{1}{4}, \frac{7}{5} = \frac{1}{4} \times \frac{5}{5}, \frac{7}{5} \times \frac{4}{4} = \frac{5}{20}, \frac{28}{20}$

(c) $\frac{2}{8}, \frac{7}{11} = \frac{2}{8} \times \frac{11}{11}, \frac{7}{11} \times \frac{8}{8} = \frac{22}{88}, \frac{56}{88}$

4. (a) $\frac{3}{5}$ (d) $\frac{2}{9}$ **5.** (a) $\frac{19}{15}$ (b) $\frac{17}{4}$ (c) $\frac{23}{6}$

6. (a) $3\frac{4}{5}$ (d) $2\frac{4}{9}$

7. (a) $\frac{17}{7} = 7\overline{)17}\,(2 = 2\frac{3}{7}$ (b) $\frac{15}{2} = 2\overline{)15}\,(7 = 7\frac{1}{2}$

-14 -14

03 01

(c) $\frac{23}{5} = 5\overline{)23}\,(4 = 4\frac{3}{5}$ (d) $\frac{47}{11} = 11\overline{)47}\,(4 = 4\frac{3}{11}$

-20 -44

03 03

(e) $\frac{39}{12} = 12\overline{)39}\,(3 = 3\frac{3}{12}$ (f) $\frac{25}{3} = 3\overline{)25}\,(8 = 8\frac{1}{3}$

-36 -24

03 01

8. (a) $6\frac{3}{5} = \frac{(5 \times 6) + 3}{5} = \frac{33}{5}$

(b) $7\frac{5}{9} = \frac{(9 \times 7) + 5}{9} = \frac{68}{9}$

(c) $3\frac{1}{10} = \frac{(10 \times 3) + 1}{10} = \frac{31}{10}$

(d) $2\frac{4}{11} = \frac{(11 \times 2) + 4}{11} = \frac{26}{11}$

(e) $6\frac{9}{25} = \frac{(25 \times 6) + 9}{25} = \frac{159}{25}$

(f) $4\frac{1}{15} = \frac{(15 \times 4) + 1}{15} = \frac{61}{15}$

Exercise 9.4

1. (a) $\frac{2}{6}, \frac{3}{6}$ = LCM = $5 \times 6 = 30$

$\frac{2 \times 6}{30} = \frac{12}{30}, \frac{3 \times 5}{30} = \frac{15}{30}$

(b) $\frac{1}{3}, \frac{5}{7} = \frac{1 \times 7}{3 \times 7}, \frac{5 \times 3}{7 \times 3} = \frac{7}{21}, \frac{15}{21}$

(c) $\frac{1}{6}, \frac{1}{11} = \frac{1 \times 11}{6 \times 11}, \frac{1 \times 6}{11 \times 6} = \frac{11}{66}, \frac{6}{66}$

(d) $\frac{1}{3}, \frac{1}{5}, \frac{1}{7}$ = LCM = $3 \times 5 \times 7 = 105$

$\frac{1 \times 35}{3 \times 35} = \frac{35}{105}, \frac{1 \times 21}{5 \times 21} = \frac{21}{105}, \frac{1 \times 15}{7 \times 15} = \frac{15}{105}$

(e) $\frac{2}{3}, \frac{1}{6}, \frac{3}{9}$ $3 = 1 \times 3$ $6 = 2 \times 3$

$9 = 3 \times 3$ $2 \times 3 \times 3 = 18$ LCM

$\frac{2}{3} \times \frac{6}{6} = \frac{12}{18}, \frac{1}{6} \times \frac{3}{3} = \frac{3}{18}; \frac{3}{9} \times \frac{2}{2} = \frac{6}{18}$

$\frac{12}{18}, \frac{3}{18}, \frac{6}{18}$

(f) $\frac{2}{9}, \frac{4}{15}, \frac{6}{17}$ $9 = 3 \times 3$ $15 = 3 \times 5$

$17 = 1 \times 17$ $3 \times 3 \times 5 \times 17 = 765$

$\frac{2}{9} \times \frac{85}{85} = \frac{170}{765}, \frac{4}{15} \times \frac{51}{51} = \frac{204}{765}; \frac{6}{17} \times \frac{45}{45} = \frac{270}{765}$

2. (a) $\frac{6}{5}, \frac{8}{3}$ = LCM = $5 \times 3 = 15$

$\frac{6 \times 3}{5 \times 3} = \frac{18}{15}$; $\frac{8 \times 5}{3 \times 5} = \frac{40}{15}$

(b) $\frac{3}{8} < \frac{9}{8}$ (c) $\frac{16}{3} < \frac{19}{3}$

(d) $\frac{13}{21} < \frac{15}{23}$ LCM = $21 \times 23 = 483$

$\frac{13 \times 23}{21 \times 23} = \frac{299}{483}$; $\frac{15 \times 21}{23 \times 21} = \frac{315}{483}$

$\frac{299}{483} < \frac{315}{483}$; $\frac{13}{21} < \frac{15}{23}$

(e) $3\frac{1}{2}, 7\frac{11}{19} = \frac{7}{2}, \frac{144}{19}$

$\frac{7 \times 19}{2 \times 19}, \frac{144 \times 2}{19 \times 2} = \frac{133}{38}, \frac{288}{38}$ $3\frac{1}{2} < 7\frac{11}{19}$

(f) $1\frac{7}{13}, \frac{10}{25} = \frac{20}{13}, \frac{10}{25}$

3. (a) $\frac{2}{9} > \frac{1}{9}$ (b) $\frac{9}{4} > \frac{9}{7}$

(c) $\frac{15}{16}, \frac{9}{20}$ $16 = 2 \times 2 \times 2 \times 2$ $20 = 2 \times 2 \times 5$

$= 2 \times 2 \times 2 \times 2 \times 5 = 80$

$\frac{15 \times 5}{16 \times 5}, \frac{9 \times 4}{20 \times 4} = \frac{75}{80} < \frac{36}{80}$ $\frac{15}{16} < \frac{9}{20}$

(d) $\frac{7}{25}, \frac{6}{17}$ $= 25 \times 17 = 425$ LCM

$\frac{7 \times 17}{25 \times 17}, \frac{6 \times 25}{17 \times 25} = \frac{119}{425} > \frac{150}{425}$ $\frac{7}{25} < \frac{6}{17}$

(e) $\frac{10}{11} < \frac{10}{8}$ (f) $\frac{11}{15} < \frac{13}{15}$

4. (a) $\frac{1}{5}, \frac{5}{7}, \frac{3}{8}, \frac{4}{9}, \frac{2}{7}$ LCM = $5 \times 7 \times 8 \times 9 \times 7 = 2520$

$\frac{1 \times 504}{5 \times 504}, \frac{5 \times 360}{7 \times 360}, \frac{3 \times 315}{8 \times 315}, \frac{4 \times 280}{9 \times 280}, \frac{2 \times 360}{7 \times 360}$

$\frac{504}{2520}, \frac{1800}{2520}, \frac{945}{2520}, \frac{1120}{2520}, \frac{720}{2520}$

$\frac{504}{2520}, \frac{720}{2520}, \frac{945}{2520}, \frac{1120}{2520}, \frac{1800}{2520}$

Ans. $\frac{1}{5}, \frac{2}{7}, \frac{3}{8}, \frac{4}{9}, \frac{5}{7}$

(b) $\frac{1}{18}, \frac{7}{18}, \frac{5}{18}, \frac{17}{18}, \frac{11}{18}$

$\frac{1}{18}, \frac{5}{18}, \frac{7}{18}, \frac{11}{18}, \frac{17}{18}$

(c) $\frac{13}{3}, \frac{15}{5}, \frac{17}{7}, \frac{11}{2}, \frac{19}{4}$

LCM = $3 \times 5 \times 7 \times 2 \times 2 = 420$

$\frac{13 \times 140}{3 \times 140}, \frac{15 \times 84}{5 \times 84}, \frac{17 \times 60}{7 \times 60}, \frac{11 \times 210}{2 \times 210}, \frac{19 \times 105}{4 \times 105}$

$\frac{1820}{420}, \frac{1260}{420}, \frac{1020}{420}, \frac{2310}{420}, \frac{1995}{420}$

$\frac{1020}{420}, \frac{1260}{420}, \frac{1820}{420}, \frac{1995}{420}, \frac{2310}{420}, \frac{17}{7}, \frac{15}{5}, \frac{13}{3}, \frac{19}{4}, \frac{11}{2}$

(d) $\frac{2}{7}, \frac{7}{12}, \frac{13}{18}, \frac{15}{19}, \frac{11}{23}$

LCM = $7 \times 1 = 7$ $\quad 2 \times 2 \times 3 = 12$

$2 \times 3 \times 3 = 18$ $\quad 19 \times 1 = 19$ $\quad 23 \times 1 = 23$

$= 7 \times 2 \times 2 \times 3 \times 3 \times 19 \times 23 = 110124$

$\frac{2}{7} \times \frac{15732}{15732} = \frac{31464}{110124}$ $\quad \frac{7}{12} \times \frac{9177}{9177} = \frac{64239}{110124}$

$\frac{13}{18} \times \frac{6118}{6118} = \frac{79534}{110124}$ $\quad \frac{15}{19} \times \frac{5796}{5796} = \frac{86940}{110124}$

$\frac{11}{23} \times \frac{4788}{4788} = \frac{52668}{110124}$ $\quad \frac{2}{7}, \frac{11}{23}, \frac{7}{12}, \frac{13}{18}, \frac{15}{19}$

5. (a) $\frac{1}{4}, \frac{5}{9}, \frac{2}{3}, \frac{7}{11}, \frac{5}{8}$ $\quad$ LCM = 792

$\frac{1 \times 198}{4 \times 198}, \frac{5 \times 88}{9 \times 88}, \frac{2 \times 264}{3 \times 264}, \frac{7 \times 72}{11 \times 72}, \frac{5 \times 99}{8 \times 99}$

$\frac{198}{792}, \frac{440}{792}, \frac{528}{792}, \frac{504}{792}, \frac{495}{792}$

$\frac{2}{3}, \frac{7}{11}, \frac{5}{8}, \frac{5}{9}, \frac{1}{4}$

(b) $\frac{19}{40}, \frac{6}{15}, \frac{7}{13}, \frac{5}{9}, \frac{1}{10}$ $\quad$ LCM = 4680

$\frac{19 \times 117}{40 \times 117}, \frac{6 \times 312}{15 \times 312}, \frac{7 \times 360}{13 \times 360}, \frac{5 \times 520}{9 \times 520}, \frac{1 \times 468}{10 \times 468}$

$\frac{2223}{4680}, \frac{1872}{4680}, \frac{2520}{4680}, \frac{2600}{4680}, \frac{468}{4680}$

$\frac{5}{9}, \frac{7}{13}, \frac{19}{40}, \frac{6}{15}, \frac{1}{10}$

(c) $\frac{2}{23}, \frac{19}{23}, \frac{11}{23}, \frac{7}{23}, \frac{5}{23}$

$\frac{19}{23}, \frac{11}{23}, \frac{7}{23}, \frac{5}{23}, \frac{2}{23}$

(d) $\frac{19}{9}, \frac{19}{13}, \frac{19}{4}, \frac{19}{6}, \frac{19}{17}$

$\frac{19}{4}, \frac{19}{6}, \frac{19}{9}, \frac{19}{13}, \frac{19}{17}$

Exercise 9.5

1. (a) $\frac{2}{9} + \frac{3}{9} = \frac{2+3}{9} = \frac{5}{9}$ $\quad$ (b) $\frac{1}{10} + \frac{4}{10} = \frac{1+4}{10} = \frac{5}{10}$

(c) $\frac{3}{8} + \frac{4}{8} = \frac{3+4}{8} = \frac{7}{8}$ (d) $\frac{3}{17} + \frac{6}{17} = \frac{3+6}{17} = \frac{9}{17}$

(e) $\frac{3}{34} + \frac{17}{34} = \frac{3+17}{34} = \frac{20}{34}$

(f) $\frac{5}{25} + \frac{3}{25} = \frac{5+3}{25} = \frac{8}{25}$

(g) $\frac{1}{11} + \frac{4}{11} + \frac{5}{11} = \frac{1+4+5}{11} = \frac{10}{11}$

(h) $\frac{2}{15} + \frac{3}{15} + \frac{4}{15} = \frac{2+3+4}{15} = \frac{9}{15}$

(i) $\frac{7}{29} + \frac{3}{29} + \frac{5}{29} = \frac{7+3+5}{29} = \frac{15}{29}$

2. (a) $\frac{3}{5} + \frac{2}{8} = \frac{24+10}{40} = \frac{34}{40}$

(b) $\frac{2}{5} + \frac{8}{9} = \frac{18+40}{45} = \frac{58}{45}$

(c) $\frac{7}{10} + \frac{4}{5} = \frac{7+8}{10} = \frac{15}{10}$

(d) $\frac{1}{8} + \frac{3}{9} = \frac{9+24}{72} = \frac{33}{72}$

(e) $\frac{12}{16} + \frac{4}{15} = \frac{180+64}{240} = \frac{244}{240}$

(f) $\frac{8}{13} + \frac{5}{17} = \frac{136+65}{221} = \frac{201}{221}$

(g) $\frac{2}{7} + \frac{1}{14} + \frac{4}{35}$ = LCM = 70 $\frac{20}{70} + \frac{5}{70} + \frac{8}{70} = \frac{33}{70}$

(h) $\frac{7}{8} + \frac{9}{16} + \frac{4}{40}$ = LCM = $2 \times 2 \times 2 \times 2 \times 5 = 80$

$\frac{70}{80} + \frac{45}{80} + \frac{8}{80} = \frac{123}{80}$

(i) $\frac{5}{16} + \frac{7}{32} + \frac{4}{64}$ LCM $= 2 \times 2 \times 2 \times 2 \times 2 \times 2 = 64$

$\frac{20}{64} + \frac{14}{64} + \frac{4}{64} = \frac{38}{64}$

3. (a) $7\frac{1}{9} + 3\frac{2}{9} = \frac{64}{9} + \frac{29}{9} = \frac{93}{9}$

(b) $2\frac{3}{8} + 4\frac{5}{8} = \frac{19}{8} + \frac{37}{8} = \frac{56}{8}$

(c) $\frac{5}{16}$, $\frac{7}{32}$, $\frac{4}{64}$ same as 2 (i)

(d) $4\frac{7}{15} + 3\frac{9}{15} = \frac{67}{15} + \frac{54}{15} = \frac{121}{15}$

(e) $1\frac{1}{17} + \frac{3}{17} = \frac{18}{17} + \frac{3}{17} = \frac{21}{17}$

(f) $\frac{5}{21} + 2\frac{2}{21} = \frac{5}{21} + \frac{44}{21} = \frac{49}{21}$

(g) $1\frac{3}{4} + 3\frac{1}{2} + 1\frac{4}{12} = \frac{7}{4} + \frac{7}{2} + \frac{16}{12}$ = LCM = 12

(h) $4\frac{3}{8} + 1\frac{5}{8} + 2\frac{1}{8} = \frac{35}{8} + \frac{13}{8} + \frac{17}{8} = \frac{65}{8} = 8\frac{1}{8}$

(i) $3\frac{1}{8} + 6\frac{12}{16} + 1\frac{3}{24} = \frac{25}{8} + \frac{108}{16} + \frac{27}{24}$

LCM $= 2 \times 2 \times 2 \times 2 \times 3 = 48$

$\frac{25 \times 6}{8 \times 6} + \frac{108 \times 3}{16 \times 3} + \frac{27 \times 2}{24 \times 2}$

$= \frac{150}{48} + \frac{324}{48} + \frac{54}{48} = \frac{528}{48}$

4. (a) $2\frac{1}{4} + 3 = \frac{9}{4} + \frac{3}{1} = \frac{9+3}{4} = \frac{12}{4}$

(b) $4\frac{1}{6} + \square = 7\frac{1}{6} \Rightarrow 7\frac{1}{6} - 4\frac{1}{6} = \frac{43}{6} - \frac{25}{6} = \frac{18}{6}$

(c) $3\frac{1}{8} + 4\frac{2}{6} = 4\frac{2}{6} + 3\frac{1}{8}$

(d) $\left[\frac{2}{5} + \frac{3}{10}\right] + \frac{4}{9} = \frac{2}{5} + \left[\frac{3}{10} + \frac{4}{9}\right]$

Exercise 9.6

1. (a) $\frac{5}{7} - \frac{3}{7} = \frac{2}{7}$ (b) $\frac{6}{15} - \frac{2}{15} = \frac{4}{15}$

(c) $\frac{3}{10} - \frac{1}{10} = \frac{2}{10}$ (d) $\frac{15}{19} - \frac{11}{19} = \frac{4}{19}$

(e) $\frac{17}{23} - \frac{2}{23} = \frac{15}{23}$ (f) $\frac{35}{48} - \frac{10}{48} = \frac{25}{48}$

2. (a) $\frac{2}{3} - \frac{1}{4} = \frac{8-3}{12} = \frac{5}{12}$ (b) $\frac{3}{8} - \frac{2}{9} = \frac{27-16}{72} = \frac{11}{72}$

(c) $\frac{1}{6} - \frac{1}{12} = \frac{2-1}{12} = \frac{1}{12}$ (d) $\frac{11}{13} - \frac{2}{5} = \frac{55-26}{65} = \frac{29}{65}$

(e) $\frac{7}{16} - \frac{5}{13} = \frac{91-80}{208} = \frac{11}{208}$

(f) $\frac{2}{5} - \frac{13}{42} = \frac{84-65}{210} = \frac{19}{210}$

3. (a) $4\frac{5}{6} - 3\frac{11}{12} = \frac{29}{6} - \frac{47}{12} = \frac{58}{12} - \frac{47}{12} = \frac{11}{12}$

(b) $9\frac{5}{16} - 4\frac{5}{8} = \frac{149}{16} - \frac{37}{8} = \frac{149}{16} - \frac{74}{16} = \frac{75}{16}$

(c) $15 - 3\frac{1}{4} = \frac{15}{1} - \frac{13}{4} = \frac{60-13}{4} = \frac{47}{4}$

(d) $12 - 6\frac{1}{3} = \frac{12}{1} - \frac{19}{3} = \frac{36-19}{3} = \frac{17}{3}$

(e) $\frac{25}{8} - \frac{7}{4} = \frac{25-14}{8} = \frac{11}{8}$

(f) $6\frac{1}{4} - 2\frac{1}{3} = \frac{25}{4} - \frac{7}{3} = \frac{75-28}{12} = \frac{47}{12}$

4. (a) $\frac{66}{5} - 10 = \frac{66-50}{5} = \frac{16}{5} = 3\frac{1}{5}$

(b) $5\frac{3}{4} - 3\frac{3}{4} = \frac{23}{4} - \frac{15}{4} = \frac{8}{4}$

(c) $3\frac{5}{8} - 10 = \frac{10}{1} - \frac{29}{8} = \frac{80+29}{8} = \frac{109}{8} = 13\frac{5}{8}$

(d) $6\frac{1}{5} - \square = 3\frac{1}{5} = \frac{31}{5} - \frac{16}{5} = \frac{15}{5} = 3$

Exercise 9.7

1. Qty of milk drink by Udit $1\frac{1}{2} = \frac{3}{2}\ \ell$

Qty of milk drink by Abhinav $= \frac{1}{2}\ell$

$= \frac{3}{2} - \frac{1}{2} = \frac{2}{2} = 1\ell$ (Udit drink more)

2. Milk drink on Thursday $= \frac{1}{2}\ell$

Milk drank on Friday $= 2\frac{3}{5} = \frac{13}{5}\ell$

Milk drank on Saturday $= 2\frac{1}{3} = \frac{7}{3}\ell$

$\frac{1}{2} + \frac{13}{5} + \frac{7}{3} = \frac{15+78+70}{30} = \frac{163}{30}\ \ell$

3. Qty of litre in tin $12\frac{1}{5} = \frac{61}{5}\ \ell$

Oil leaked from tin $= 7\frac{2}{4} = \frac{30}{4}\ \ell$

Oil left in tin $= \frac{61}{5} - \frac{30}{4} = \frac{244-150}{20}\ \ell$

$= \frac{94}{20}\ \ell$

4. Time spent in studies $= 3\frac{1}{5} = \frac{16}{5}$ hrs

Time spent in playing $= 2\frac{1}{3} = \frac{7}{3}$ hrs

Total time spend $= \frac{16}{5} + \frac{7}{3} = \frac{48+35}{15} = \frac{83}{15}$ = hrs.

5. Total Qty of petrol = 10 ℓ

Petrol used in bike $= 4\frac{1}{3} = \frac{13}{3}$ ℓ

Petrol used in scooter $= 2\frac{1}{4} = \frac{9}{4}$ ℓ

$$10 - \frac{13}{3} + \frac{9}{4} = 10 - \frac{52+27}{12}$$

$$= \quad 10 - \frac{79}{12} = \frac{120-79}{12} = \frac{41}{12}\ \ell$$

6. Distance travelled in two days $= 35\frac{3}{8}$ km

Distance travelled on first day $= 10\frac{2}{3} = \frac{32}{3}$ = km

$$\frac{283}{8} - \frac{32}{3} = \frac{849-256}{24} = \frac{593}{24} \text{ km}$$

7. Length of Ribbon $= 15\frac{1}{7} + 10\frac{3}{6} + 12\frac{3}{8}$

$$\frac{106}{7} + \frac{63}{6} + \frac{99}{8} \qquad = \text{LCM} = 168$$

$$\frac{106 \times 24}{7 \times 24} + \frac{63 \times 28}{6 \times 28} + \frac{99 \times 21}{8 \times 21}$$

$$\frac{2544}{168} + \frac{1764}{168} + \frac{2079}{168}$$

$$= \frac{6387}{168}$$

Exercise 9.8

1. (a) $\frac{2}{3} \times 9 = 2 \times 3 = 6$ (b) $\frac{3}{4} \times 24 = 3 \times 6 = 18$

(c) $\frac{5}{8} \times 32 = 5 \times 4 = 20$ (d) $\frac{2}{9} \times 3 = \frac{2}{3}$

(e) $\frac{1}{5} \times 7 = \frac{7}{5}$ (f) $\frac{3}{10} \times 15 = \frac{45}{10} = \frac{9}{2}$

(g) $2\frac{5}{6} \times 14 = \frac{17}{6} \times 14 = \frac{17 \times 7}{3} = \frac{119}{3}$

(h) $3\frac{1}{5} \times 7 = \frac{16 \times 7}{5} = \frac{112}{5}$

(i) $2\frac{5}{9} \times 3 = \frac{23 \times 3}{9} = \frac{23}{3}$

2. Multiply

(a) $\frac{2}{3} \times \frac{1}{5} = \frac{2}{15}$ (b) $\frac{4}{8} \times \frac{3}{5} = \frac{12}{40} = \frac{3}{10}$

(c) $\frac{1}{9} \times \frac{2}{6} = \frac{2}{54} = \frac{1}{27}$ (d) $\frac{4}{7} \times \frac{5}{11} = \frac{20}{77}$

(e) $\frac{10}{16} \times \frac{2}{7} = \frac{20}{112} = \frac{5}{28}$ (f) $\frac{5}{13} \times \frac{2}{17} = \frac{10}{221}$

(g) $\frac{13}{5} \times 2\frac{3}{7} = \frac{13}{5} \times \frac{17}{7} = \frac{221}{35}$

(h) $3\frac{7}{13} \times 2\frac{1}{5} = \frac{46}{13} \times \frac{11}{5} = \frac{506}{65}$

(i) $5\frac{1}{7} \times 2\frac{3}{19} = \frac{36}{7} \times \frac{41}{19} = \frac{1476}{133}$

3. (a) $3\frac{1}{9} = \frac{3}{9} = \frac{1}{3}$ (b) $2 \times \frac{1}{26} = \frac{2}{26} = \frac{1}{13}$

(c) $5 \times \frac{1}{35} = \frac{5}{35} = \frac{1}{7}$ (d) $\frac{4}{9} \times 45 = 4 \times 5 = 20$

(e) $\frac{3}{7} \times 63 = 3 \times 9 = 27$ (f) $\frac{3}{8} \times \frac{5}{18} = \frac{15}{144}$

4. (a) $\frac{1}{5} \times 100 = 20$ paise (b) $\frac{3}{6} \times 24 = 3 \times 4 = 12$ hrs

(c) $\frac{3}{7} \times 7 = 3$ days (d) $\frac{1}{4} \times 1000 = 250$ m

(e) $\frac{2}{5} \times 7 = 2 \times 12 = 24$ min (g) $\frac{3}{50} \times 100 = 3 \times 2 = 6$ rupees

Exercise 9.9

1. (a) $\frac{5}{1}$ (b) $\frac{9}{1}$ (c) $\frac{1}{6}$ (d) $\frac{1}{8}$

(e) $\frac{5}{2}$ (f) $\frac{7}{3}$ (g) $\frac{8}{3}$ (h) $1\frac{3}{7} = \frac{10}{7} = \frac{7}{10}$

2. (a) $\frac{3 \times 7}{7 \times 3} = \frac{21}{21} = 1$ (b) $\frac{13}{15} \times \frac{15}{13} = 1$

(c) $\frac{2}{17} \times \frac{17}{2} = 1$ (d) $\frac{8}{11} \times \frac{11}{8} = 1$

(e) $\frac{23}{18} \times \frac{18}{23} = 1$ (f) $\frac{3}{19} \times \frac{19}{3} = 1$

Exercise 9.10

1. (a) $\frac{3}{7} \div 7 = \frac{3}{7} \times \frac{1}{7} = \frac{3}{49}$ (b) $\frac{4}{7} \div 4 = \frac{4}{7} \times \frac{1}{4} = \frac{4}{28}$

(c) $\frac{7}{13} \times \frac{1}{63} = \frac{1}{13} \times \frac{1}{9} = \frac{1}{117}$

(d) $\frac{24}{36} \times \frac{1}{42} = \frac{2}{3} \times \frac{1}{42} = \frac{1}{3} \times \frac{1}{21} = \frac{1}{63}$

(e) $\frac{15}{70} \times \frac{1}{45} = \frac{1}{70} \times \frac{1}{3} = \frac{1}{210}$

(f) $\frac{9}{42} \times \frac{1}{32} = \frac{9}{1344} = \frac{3}{448}$

2. (a) $\frac{3}{7} \div 2 = \frac{3}{7} \times \frac{1}{2} = \frac{3}{14}$

(b) $\frac{4}{5} \div 3 = \frac{4}{5} \times \frac{1}{3} = \frac{4}{15}$

(c) $\frac{8}{9} \times \frac{1}{15} = \frac{8}{135}$ (d) $\frac{6}{7} \times \frac{5}{4} = \frac{30}{28}$

(e) $74 \times \frac{9}{2} = 37 \times 9 = 333$

(f) $36 \times \frac{5}{6} = 6 \times 5 = 30$

3. (a) $10\frac{2}{7} \div 21 = \frac{72}{7} \times \frac{1}{21} = \frac{72}{147} = \frac{24}{49}$

(b) $6\frac{5}{5} \div 58 = \frac{35}{5} \times \frac{1}{58} = \frac{7}{58}$

(c) $30\frac{2}{7} \div 35 = \frac{212}{7} \times \frac{1}{35} = \frac{212}{245}$

(d) $5\frac{4}{5} \div \frac{11}{15} = \frac{29}{5} \times \frac{15}{11} = \frac{29 \times 3}{11} = \frac{87}{11}$

(e) $13\frac{3}{5} \div \frac{1}{2} = \frac{68}{5} \times \frac{2}{1} = \frac{136}{5}$

(f) $7\frac{7}{10} \div 55 = \frac{77}{10} \times \frac{1}{55} = \frac{7}{10 \times 5} = \frac{7}{50}$

Exercise 9.11

1. Total Length of cloth = 45 m

$$45 - \frac{3}{7} = \frac{315 - 3}{7} = \frac{312}{7} \text{ m}$$

2. $7\frac{3}{7} \div 2\frac{3}{7} = \frac{52}{7} \div \frac{17}{7} = \frac{52}{7} \times \frac{7}{17} = \frac{52}{17}$

3. $4\frac{2}{5} \div 2\frac{1}{3} = \frac{22}{5} \div \frac{7}{3} = \frac{22}{5} \times \frac{3}{7} = \frac{66}{35}$

4. ₹ $3\frac{4}{7} \div 50 = \frac{25}{7} \times \frac{1}{500} = \frac{1}{7 \times 20} = \frac{1}{140}$ = 140 tickets

5. Total cost of pencils = ₹ 24

Cost of one pencil $= 1\frac{1}{2}$ = ₹ $\frac{3}{2}$

No. of pencil bought = $24 \div \frac{3}{2}$

$= 24 \times \frac{2}{3} = 8 \times 2 = 16$ pencils

6. $300 - \frac{3}{10} = \frac{3000 - 3}{10} = \frac{2997}{10}$ = m. cloth left.

MCQ's

1. (c) improper fraction **2.** (c) $\frac{4 \times 5}{7 \times 5} = \frac{20}{35}$

3. (c) $\frac{4}{27}$ **4.** (a) and (d)

Mental Math

1. (a) half (b) fraction (c) $4\frac{1}{6} \times 24$

2. (a) $\frac{1}{7}, \frac{2}{14}, \frac{3}{21}, \frac{4}{28}, \frac{5}{35}, \frac{6}{42}$

(b) $\frac{3}{16}, \frac{6}{32}, \frac{9}{48}, \frac{12}{64}, \frac{15}{80}, \frac{18}{96}$

(c) $\frac{3}{5}, \frac{6}{10}, \frac{9}{15}, \frac{12}{20}, \frac{15}{25}, \frac{18}{30}$

3. (a) $\frac{1}{9}, \frac{2}{9}, \frac{4}{9}, \frac{5}{9}$

(b) $\frac{2}{19}, \frac{2}{13}, \frac{5}{17}, \frac{4}{11}$ = LCM = 46189

$\frac{2 \times 2431}{19 \times 2431}, \frac{2 \times 3553}{13 \times 3553}, \frac{5 \times 2717}{17 \times 2717}, \frac{4 \times 4199}{11 \times 4199}$

$\frac{4862}{46189}, \frac{7106}{46189}, \frac{13585}{46189}, \frac{16796}{46189}$

$\frac{2}{19}, \frac{2}{13}, \frac{5}{17}, \frac{4}{11}$

4. (a) $\frac{1}{23} + \frac{4}{23} + \frac{5}{23} = \frac{9}{23}$

(b) $\frac{9}{19} - \frac{2}{19} + \frac{1}{19} = \frac{7}{19} + \frac{1}{19} = \frac{8}{19}$

Chapter 10 : Decimals

Exercise 10.1

1. (a) $\frac{6}{10} = 0.6$ (b) $\frac{4}{100} = 0.04$

(c) $\frac{87}{100} = 0.87$ (d) $\frac{60}{1000} = 0.06$

(e) $\frac{474}{1000} = 0.474$ (f) $\frac{300}{1000} = 0.3$

(g) $\frac{15}{1000} = 0.015$ (h) $\frac{9}{1000} = 0.009$

2. (a) $0.7 = \frac{7}{10}$ (b) $0.02 = \frac{2}{100}$

(c) $0.19 = \frac{19}{100}$ (d) $0.085 = \frac{85}{1000}$

(e) $0.515 = \frac{515}{1000}$ (f) $0.670 = \frac{670}{1000}$

(g) $0.009 = \frac{9}{1000}$ (h) $0.045 = \frac{45}{1000}$

3. (a) 0.7 = Zero point seven

(b) 0.09 = Zero point zero nine

(c) 5.34 = Five point three four

(d) 42.357 = Forty two point three five seven

(e) 759.04 = Seven hundred fifty nine point zero four

(f) 70.005 = Seventy point zero zero five

(g) 612.8 = Six hundred twelve point eight

(h) 8.954 = Eight point nine five four

4. a – 3, b – 1, c – 5, d – 4, e – 2

5.

	H	T	O	Point	Tenths	Hundredths	Thousandths
(a)			8	.	3	7	
(b)		5	8	.	5	7	
(c)			3	.	7	4	
(d)		3	8	.	5	7	2
(e)	1	8	9	.	2	5	
(f)	3	5	4	.	3	7	9
(g)				.	7	4	5
(h)	5	4	8	.	0	0	9

6. (a) $47.059 = 40 + 7 + \frac{5}{100} + \frac{9}{1000}$

(b) $549.07 = 500 + 40 + 9 + \frac{7}{100}$

(c) $125.306 = 100 + 20 + 5 + \frac{3}{10} + \frac{0}{100} + \frac{6}{1000} + \frac{6}{1000}$

(d) $408.059 = 400 + 0 + 8 + \frac{5}{100} + \frac{9}{1000}$

(e) $23.75 = 20 + 3 + \frac{7}{10} + \frac{5}{100}$

(f) $76.09 = 70 + 6 + \frac{9}{100}$

(g) $14.278 = 10 + 4 + \frac{2}{10} + \frac{7}{100} + \frac{8}{1000}$

(h) $794.008 = 700 + 90 + 4 + \frac{8}{1000}$

7. (a) 50 (b) $\frac{5}{100}$ (c) 5 (d) 500

(e) 5 (f) $\frac{5}{10}$ (g) $\frac{5}{100}$ (h) $\frac{5}{1000}$

8. (a) $\frac{5}{100}$ (b) $\frac{5}{1000}$ (c) $\frac{7}{100} + \frac{2}{1000}$

(d) $\frac{4}{100} + \frac{5}{1000}$ (e) $\frac{7}{10} + \frac{9}{100} + \frac{6}{1000}$

(f) $\frac{7}{100} + \frac{5}{1000}$

9. (a) 7.237 (b) 56.325 (c) 657.305 (d) 17.003

MCQ's

1. (c) $\frac{457}{10}$ **2.** (d) 0.903 **3.** (b) 0.070

Mental Math

1. (a) 8.05 (b) $80 + 4 + \frac{5}{10} + \frac{4}{100} + \frac{5}{1000}$

2. (a) $\frac{5}{100}$ (b) 1 (c) 800

Chapter 11 : Metric Measure

Exercise 11.1

1. (a) 7m 12 cm
$(7 \times 100) + 12$
$= 700 + 12 = 712$ cm

(b) 9cm 4 mm
$(9 \times 10) + 4$
94 mm

(c) 11 cm 5 mm
$11 \times 10 + 5$
$110 + 5 = 115$ mm

(d) 15 l 15 ml
$(15 \times 1000) + 15$
$15000 + 15 = 15015$ ml

2. (a) 1000 mg (b) 1000 ml (c) 100 cm

(d) 10 mm (e) 1000 m (f) 1000 g

3. (a) 455 mm = 1 mm = $\frac{1}{10}$ cm

455 mm = $\frac{455}{10}$ = 45.5 = 45 cm 5 mm.

(b) 72354 m = 1m = $\frac{1}{1000}$ km

$\frac{72354}{1000}$ = 72.354 = 72 km 354 m.

(c) 675 cm = 1m = $\frac{1}{100}$ m

675 cm = $\frac{675}{100}$ = 6.75 = 6m 75 cm

(d) 27356 g = 1g = $\frac{1}{1000}$ kg

$\frac{27356}{1000}$ = 27.356 = 27 kg 356 g

4. (a) $\frac{4000}{1000}$ ml = 4l (b) $\frac{5000}{1000}$ g = 5kg

(c) $\frac{2000}{1000}$ mg = 2g (d) $\frac{40}{10}$ mm = 4 cm

Exercise 11.2

1. (a)

km	m
42	344
– 35	672
78	016

(b)

kg	g
174	355
– 128	486
302	841

(c)

l	ml
72	459
– 19	392
91	851

2. (a)

km	m
425	726
– 145	389
280	337

(b)

kg	g
714	567
– 110	358
604	209

(c)

l	ml
94	836
– 28	998
65	838

Exercise 11.3

1. (a)

km	m
23	475
	× 5
117	. 375

(b)

kg	g
42	120
	× 7
294	. 840

(c)

m	cm
94	32
	× 3
282	. 96

(d) kg g

72.438

× 10

00.000

724.38×

7 2 4 . 3 8 0

(e) km m

73.451

× 19

661.059

734.51×

1 3 9 5 . 5 6 9

(f) m cm

85.19

× 16

511.14

851.9×

1 3 6 3 . 0 4

2. (a) 377m 60cm ÷ 4

4) 377.60 (94.4

−36

17

−16

016

−016

0

94 m 4cm

(b) 81 kg 189 g ÷ 9

9) 81.189 (9.021

−81

18

−18

09

−09

0

9 kg 21g

(c) 48 l 726 ml ÷ 6

6) 48.726 (8.121

−48

07

−06

12

−12

06

−06

×

8 l 121 ml

(d) 354 l 400 ml ÷ 8

8) 354.400 (44.300

−32

34

−32

24

−24

×

44 l 300ml

(e) 274 km 50 m ÷ 15

15) 274.50 (18.30

−15

124

−120

045

−045

0

18 km 30 m

(f) $32\overline{)3950.592(}123.456$

-32

75

-64

110

-096

145

-128

179

-160

192

-192

$\times$

123 kg 450 g

Exercise 11.4

1. Distance covered by car — 7 km 75m

Distance covered by bus — + 3 km 850m

Distance from home to school = — 10 km 925 m

2. Length of one piece of wood = — 4m 30cm

Length of second piece of wood = — + 6m 40cm

10km 70cm

Part of wood painted — – 4m 37cm

Part of wood left unpainted — 6m 33cm

3. Qty of milk in container — 38l 000ml

Qty of milk sold — – 25l 780ml

Qty of milk left — 12l 220ml

4. Length of electric wire — 378m

Piece of wire cut — – 15m 35cm

Wire left on roll — 362m 65cm

5. Qty of oil in tin — 28kg 000g

Qty of oil consumed — – 4kg 070g

23kg 930g

6. Total weight of heap of wheat — 36kg 474g
Weight of one heap — − 24kg 764g
Weight of other heap — 11kg 710g

Chapter 12 : Measurement of Time

Exercise 12.1

1. (a) 8:30 (b) 2:20 (c) 11:50 (d) 5:35

2. Do yourself

3. (a) 3:25 (b) 12:55 (c) 10:50
(d) 6:45 (e) 4:30 (f) 4:50

4. (a) 20 minutes past 4 (b) 35 minutes past 7
(c) 5 minutes to 10 (d) 10 minutes past 11
(e) 20 minutes to 1 (f) 5 minutes to 2

Exercise 12.2

1. (a) 6 hours
1 hr = 60 min
6 hr = 6 × 60 = 360 min

(b) 4 hr 27 min
4 hr = 4 × 60
= 240 + 27 = 267 min

(c) 15 hrs 59 min
15 hrs = 15 × 60
= 900 + 59 = 959 min

(d) 22 hrs 20 min
22 hr = 22 × 60
1320 + 20 = 1340 min

2. (a) 5 hrs 35 min
1 hr = 3600 sec
1 min = 60 sec
5 hrs = 5 × 3600
35 min = 35 × 60 =

$$\begin{array}{r} 18000 \\ -\ 2100 \\ \hline 20100 \end{array}$$ seconds

(b) 12 hrs
12 × 3600 = 43200 seconds

(c) 2 hr 10 min 35 sec
2 hr = 2 × 3600 =
10 min = 10 × 60 =
35 sec =

$$\begin{array}{r} 7200 \\ 600 \\ +\ 35 \\ \hline 7835 \end{array}$$ seconds

(d) 10 hrs 35 min 16 sec

10 hrs = 10 × 3600 =

35 min = 35 × 60 =

16 sec

$$\begin{array}{r} 36000 \\ 2100 \\ +\ 16 \\ \hline 38116 \end{array}$$ seconds

3. (a) 237 min = 1 min $\frac{1}{60}$ hr

$$60\overline{)237}\,(3$$
$$-180$$
$$057$$

= 3 hrs 57 min

(b) 590 min

$$60\overline{)590}\,(9$$
$$-540$$
$$050$$

= 9 hr 50 min

(c) 936 min

$$60\overline{)936}\,(15$$
$$-60$$
$$336$$
$$-300$$
$$\times$$

15 hrs 36 min

(d) 1045 min

$$60\overline{)1045}\,(17$$
$$-60$$
$$445$$
$$-420$$
$$25$$

17 hrs 25 min

(e) 1344 min

$$60\overline{)1344}\,(22$$
$$-120$$
$$144$$
$$-120$$
$$24$$

22 hrs 24 min

(f) 1500 min

$$60\overline{)1500}\,(25$$
$$-120$$
$$300$$
$$-300$$
$$\times$$

= 25 hours

4. (a) 6580 seconds

$3600\overline{)6580}(1$

-3600

2980

$60\overline{)2980}(49$

-240

580

-540

40

1 hr 49 min 40 sec

(b) 6749 seconds

$60\overline{)6749}(112$

-60

74

-60

149

$1\ 4\ 9$

$-\ 1\ 2\ 0$

$2\ 9$

= 112 min 29 sec

112 min into hr.

$60\overline{)112}(1$

-60

52

= 1 hr 52 min 29 sec.

(c) 2766 seconds

Seconds into minutes

$60\overline{)2766}(46$

-240

0366

-0360

006

o hr 46 min 6 sec.

(d) 8590 seconds

$60\overline{)8590}(\ 143$

-360

259

-240

190

-180

10

143 min 10 sec.

143 min into hr.

$60\overline{)143}(2$

-120

23

= 2 hrs. 23 min 10 sec.

(e) 7644 seconds

$60\overline{)7644}(\ 127$

-60

164

-120

444

-420

24

127 min 24 sec. = 127 min into hr.

$60\overline{)127}(2$

-120

07

= 2 hr 7 min 24 sec.

(f) 9585 seconds

$$60\overline{)9585}\,(159$$
$$-60$$
$$358$$
$$-300$$
$$585$$
$$-540$$
$$45$$

$$60\overline{)159}\,(2$$
$$-120$$
$$39$$

= 159 min 45 sec. = 2 hrs 39 min 45 sec

Exercise 12.3

1. (a)

Hr	min	sec
10	20	30
+ 9	25	46
19	45	76

76 sec = 1 min 16 sec

45 min = 45 + 1 = 46 min

Ans. 19 hr 46 min 16 sec

(b)

Hr	min	sec
22	48	39
+ 5	15	42
27	63	81

Hrs = 27 + 1 = 28 hrs

min 63 + 1 = 64 min = 1 hrs 4 min

sec = 81 = 1 min 21 sec

= 28 hr 4 min 21 sec.

(c)

Hr	min	sec
25	26	37
+ 10	20	30
35	46	67

67 sec = 1 min 7 sec

46 + 1 = 47 min = 35 hrs.

= 35 hrs 47 min 7 sec

(d)

Hr	min
10	10
+ 15	15
25	25

(e)

Yr	mrths
12	9
+ 4	11
16	20

20 months = 1 year 8 months

16 + 1 = 17 year. = 17 yr 8 months

2. (a)

Min	sec
38	55
– 12	39
26	16

(b)

Min	sec
25	47
– 17	19
8	28

(c)

Hr	min	sec
37	45	30
– 18	15	25
19	30	5

3. (a)

Min	sec
35	10
– 13	15
24	55

Borrow 1 min to sec

60 + 10 = 70 sec, 70 – 15 = 55 sec

35 – 1 = 34 – 13 = 21 min

(b)

Hr	min	sec
12	20	30
– 5	10	40
7	9	50

Borrow 1 min

60 + 30 = 90 – 40 = 50 sec

20 – 1 = 19 – 10 = 9 min

(c)

Hr	min	sec
32	25	35
– 17	35	45
14	49	50

Borrow 1 min to sec

60 + 35 = 95 – 45 = 50 sec

25 – 1 = 24 + 60 = 84 min

Borrow 1 hrs

84 – 35 = 49 min

32 – 1 = 31 – 17 14 hrs

4. Time travelled by car

Time travelled by train

Min	sec
10	30
– 5	30

Total travel Time 15 60 = 16 hrs.

5. Time at which program ends = 3:15 pm

15 : 15
– 11 : 30
3 : 45

Time at which program start =

Borrow 1 hr i e 60 min 15 + 60 = 75 – 30 = 45

15 – 1 = 14 – 11 = 3 hrs.

Duration of Program = 3 hrs 45 min

6. Time at which Bhumi reaches school

8 : 45
– : 35 min
8 : 10

Time taken to reach school

Time she start from her house

Chapter 13 : Money

Exercise 13.1

1. (a) ₹ 2006.78 = ₹ Two thousand and six and seventy eight paise

(b) ₹ 3.45 = Three rupees forty five paise

(c) ₹ 0.09 = Nine paise

(d) ₹ 145.37 = One hundred forty five rupees and thirty seven paise

(e) ₹ 95.05 = Ninety five rupees and five paise

2. (a) ₹ 84.57 (b) ₹ 202.08 (c) ₹ 11.05

(d) ₹ 0.06 (e) ₹ 8.08

3. (a) 200 rupees 20 paise 1 rupee = 100 p.

200 rupees = 200 × 100 = 20000 + 20 = 20020 paise

(b) 102 rupees 05 p.

(102 × 100) + 5 = 10200 + 5 = 10205 p.

(c) 540 rupees and 55 p

(540 × 100) + 55 = 54000 + 55 = 54055 p.

(d) 1 rupees 18 p

(1 × 100) + 18 = 100 + 18 = 118 p

(e) 9 rupee 99 p

(9 × 100) + 99 = 900 + 99 = 999 p

(f) 714 rupees 71 p.

(714 × 100) + 71 = 71400 + 71 = 71471 p

4. (a) ₹ 25.40

(25 × 100) + 40

= 2500 + 40 = 2540 p

(b) ₹ 123.29

(123 × 100) + 29

12300 + 29 = 12329 p

(c) ₹ 743.84

(743 × 100) + 84

74300 + 84 = 74384 p.

(d) ₹ 7.09

(7 × 100) + 9

700 + 9 = 709 p

(e) ₹ 673.55

(673 × 100) + 55

67300 + 55 = 67355 p

(f) ₹ 1.50

(1 × 100) + 50

= 150 p

(g) ₹ 79.15
(79 × 100) + 15
7900 + 15 = 7915 p

(h) ₹ 331.14
(331 × 100) + 14
33100 + 14 = 33114 p

(i) ₹ 1036.24
(1036 × 100) + 24
103600 + 24 = 103624 p.

5. (a) 4137 p. = 1 p = ₹ $\frac{1}{100}$

$\frac{4137}{100}$ = 41.37 = ₹ 41.37 p

(b) 94356 p = $\frac{94356}{100}$ = ₹ 943.56 p

(c) 6435 p = $\frac{6435}{100}$ = ₹ 64.35 p

(d) 14 p = $\frac{14}{100}$ = ₹ 0.14

(e) 13427 p = $\frac{13427}{100}$ = ₹ 134.27 p

(f) 25614 p = $\frac{25614}{100}$ = ₹ 256.14 p

(g) 305 p = $\frac{305}{100}$ = ₹ 3.05 p

(h) 93 p = $\frac{93}{100}$ = ₹ 0.93

Exercise 13.2

1. (a)
$$\begin{array}{r} 420.90 \\ +\ 344.15 \\ \hline ₹\ 765.05 \end{array}$$

(b)
$$\begin{array}{r} 425.37 \\ +\ 672.48 \\ \hline ₹\ 1097.85 \end{array}$$

(c)
$$\begin{array}{r} 7294.09 \\ +\ 368.94 \\ \hline ₹\ 7663.03 \end{array}$$

(d)
$$\begin{array}{r} 1567.90 \\ 355.09 \\ +\ 67.25 \\ \hline ₹\ 1990.24 \end{array}$$

(e)
$$\begin{array}{r} 3547.42 \\ 3674.49 \\ +\ 24.55 \\ \hline ₹\ 7246.46 \end{array}$$

(f)
$$\begin{array}{r} 423.72 \\ 1062.48 \\ +\ 10.19 \\ \hline ₹\ 1496.39 \end{array}$$

(g)
$$\begin{array}{r} 1423.14 \\ 179.00 \\ 2.34 \\ +\ 0.24 \\ \hline ₹\ 1604.72 \end{array}$$

(h)
$$\begin{array}{r} 935.96 \\ 1042.35 \\ 44.00 \\ +\ 0.01 \\ \hline ₹\ 2022.32 \end{array}$$

(i)
$$\begin{array}{r} 5.20 \\ 3.40 \\ +\ 8.25 \\ \hline 16.85 \end{array}$$

(j)
$$\begin{array}{r} 1025.34 \\ 949.85 \\ +\ 2345.99 \\ \hline ₹\ 4321.18 \end{array}$$

2. (a)
$$\begin{array}{r} 480.68 \\ -\ 39.59 \\ \hline ₹\ 441.09 \end{array}$$

(b)
$$\begin{array}{r} 745.60 \\ -\ 198.78 \\ \hline ₹\ 546.82 \end{array}$$

(c)
$$\begin{array}{r} 500.00 \\ -\ 347.78 \\ \hline ₹\ 152.22 \end{array}$$

(d)
$$\begin{array}{r} 2000.50 \\ -\ 24.78 \\ \hline ₹\ 1975.72 \end{array}$$

(e)
$$\begin{array}{r} 403.84 \\ -\ 19.99 \\ \hline ₹\ 383.85 \end{array}$$

(f)
$$\begin{array}{r} 3540.70 \\ -\ 2548.34 \\ \hline ₹\ 992.36 \end{array}$$

(g)
$$\begin{array}{lr} \text{Cost of book} & 290.47 \\ \text{Cost of magazine} & -\ 108.37 \\ & \hline & ₹\ 182.10 \end{array}$$

Book costs more by ₹ 182.10

(h)
$$\begin{array}{lr} \text{Money given to shopkeeper} & 3000.00 \\ \text{Cost of spirt} & -\ 2057.37 \\ \text{Money given back} & \hline ₹\ 942.63 \end{array}$$

Exercise 13.3

1. (a)
$$\begin{array}{r} 25.36 \\ \times\ 5 \\ \hline ₹\ 126.80 \end{array}$$

(b)
$$\begin{array}{r} 326.10 \\ \times\ 7 \\ \hline ₹\ 2282.70 \end{array}$$

(c)
$$\begin{array}{r} 114.10 \\ \times\ 24 \\ \hline 456.40 \\ 2282.0\times \\ \hline ₹\ 2738.40 \end{array}$$

(d)
$$\begin{array}{r} 235.19 \\ \times\ 35 \\ \hline 1175.95 \\ 7055.7\times \\ \hline ₹\ 8231.65 \end{array}$$

(e)
$$\begin{array}{r} 436.56 \\ \times\ 19 \\ \hline 3929.04 \\ 4365.6\times \\ \hline ₹\ 8294.64 \end{array}$$

(f)
$$\begin{array}{r} 1048.95 \\ \times\ 42 \\ \hline 2097.90 \\ 41958.0\times \\ \hline ₹\ 44055.90 \end{array}$$

2. Cost of 1 kg wheat
Cost of 13 kg wheat
$$\begin{array}{r} 22.72 \\ \times\ 13 \\ \hline 68.16 \\ 227.2\times \\ \hline ₹\ 295.36 \end{array}$$

3. Cost of one cooler
Cost of 29 coolers
$$\begin{array}{r} 3480 \\ \times\ 29 \\ \hline 31320 \\ 6960\times \\ \hline ₹\ 100920 \end{array}$$

4. Monthly income
Yearly income
$$\begin{array}{r} 25480.68 \\ \times\ 12 \\ \hline 50961.36 \\ 254806.8\times \\ \hline ₹\ 305768.16 \end{array}$$

5. Cost of one table
Cost of 23 tables
$$\begin{array}{r} 629.39 \\ \times\ 23 \\ \hline 1888.17 \\ 12587.8\times \\ \hline ₹\ 14475.97 \end{array}$$

1. (a)
$$\begin{array}{l} 3\overline{)45.39(}9.021 \\ -3 \\ \hline 15 \\ -15 \\ \hline 03 \\ -03 \\ \hline 09 \\ -09 \\ \hline \times \end{array}$$
₹ 15.13

(b)
$$\begin{array}{l} 4\overline{)299.04(}74.76 \\ -28 \\ \hline 19 \\ -16 \\ \hline 30 \\ -28 \\ \hline 24 \\ -24 \\ \hline \times \end{array}$$
₹ 74.76

(c) $12\overline{)49080}(4090$

-48

108

-108

00

₹ 4090

(d) $10\overline{)1056.60}(105.66$

-10

56

-50

66

-60

60

-60

$\times$

₹ 105.66

2. Cost of 13 erasers = ₹ 16.90

Cost of one eraser = ₹ 16.90 ÷ 3 = ₹ 5.63

3. Cost of 36 kg onions = ₹ 440.64

Cost of one onion = 440.64 ÷ 36 = ₹ 12.24

4. Weekly pocket money of Nitya ₹ 640.50

Daily pocket money = 640.50 ÷ 7 = ₹ 91.50

5. Total exp = ₹ 867.84

expenditure per children = 867.84 ÷ 6 = ₹ 144.64

MCQ's

1. (b) $\frac{1000}{50} = 20$

2. (c) $\frac{100000}{100} = 1000$

3. (b) $\frac{22.50}{18} = ₹ 1.25$

Mental Maths

1. (b) ₹ 34.85 < 3845 p (38.45)

(b) ₹ 75.57 < 7575 p (₹ 75.75 p)

(c) ₹ 9.09 = 909 p

(d) ₹ 70.7 = 7007 p. (70 × 100 + 7)

2. Cost of 7 notebooks = 7 × 15.70 = ₹ 109.9

Money with varun = 300 . 00

Money left with varun = − 109 . 90

₹ 190 . 10

3. Cost of 1 banana = ₹ 2.35

Cost of 12 banana 12 × 2.35 = ₹ 28.2

Chapter 14 : Geometry

Exercise 14.1

1. (a) Three (b) 5 (c) 6 (d) 8

2. (a) line segment (b) Ray (c) Line

3. (a) Line $\overleftrightarrow{PQ}$ (b) $\overleftrightarrow{XY}$ Ray

(c) $\overleftrightarrow{AB}$ Line Segment

4. (a) <PQR (b) <ABC, <ABD, <DBC (c) <XYZ

5. (a) PQ and QR (b) Q (c) <PQR

Exercise 14.2

1. (a) one, two (b) 90° (c) 180° (d) 360°

2. Do it yourself **3.** Do it yourself

4. (a) 90° – 80° = 10° (b) 90° – 55° = 35°

(c) 90° – 60° = 30° (d) 90° – 39° = 51°

(e) 90° – 44° = 46°

5. (a) 180° – 94° = 86° (b) 180° – 155° = 25°

(c) 180° – 79° = 101° (d) 180° – 35° = 145°

(e) 180° – 140° = 40°

6. 45°, 45° **7.** 90° and 90°

Exercise 14.3

1. (a) same (b) equilateral triangle

(c) isosceles triangle (d) 3, 3

(e) unequal (f) obtuse

2. (a) Equilateral triangle (b) Isosceles triangle

(c) Isosceles triangle (d) Scalene triangle

(e) Scalene triangle (f) Equilateral triangle

3. (a) Acute angled triangle (b) Right angled triangle

(c) Obtuse angled triangle

Exercise 14.4

1. (a) 4 (b) right (c) equal **2.** Rectangles = (a), (c), (e), (f)
(d) 4 (e) rectangle Squares = (b), (d)

3. (a) T (b) F (c) F (d) F

MCQ's

1. (c) line segment **2.** 8 cm 3mm = 8.3 cm

Mental Math

1. (a) 7 sides (b) angle (c) vertices, sides

2. (a) indefinite (b) one

Chapter 15 : Perimeter

Exercise 15.1

1. (a) 1 + 4 + 2 + 3 + 2 = 12 cm
(b) 1 + 3 + 1 + 3 + 1 + 4 = 13 cm
(c) 1 + 2 + 1 + 2 + 1 + 2 + 1 + 2 = 12 cm
(d) 2 + 6 + 5 + 4 + 3 = 20 cm

2. (a) 10 + 12 + 15 = 37 cm (b) 7 + 9 + 12 = 28 cm
(c) 20 + 25 + 18 = 63 cm
(d) 4.15 + 6.42 + 7.44 = 18.01 cm

3. (a) 15 × 4 = 60 cm (b) 17 × 4 = 68 cm
(c) 30 × 4 = 120 cm (d) 10.25 × 4 = 41 cm

4. (a) 2 (l + b) = 2 (25 + 10) = 2 × 35 = 70 cm
(b) 2 (14 + 8) = 2 × 22 = 44 cm
(c) 2 (10 + 19) = 2 × 29 = 58 cm
(d) 2 (10.15 + 13.14) = 2 × 23.29 = 46.58 cm

5. 7 × 3 = 21 cm **6.** 10 + 15 + 18 = 43 cm

7. 36 × 4 = 144 cm **8.** 100 × 4 = 400 × 7 = ₹2800

9. $\frac{64}{4}$ = 16 cm.

10. P = 2 (l + b)
120 = 2 (l + 28)
120 = 2l + 56
2l = 120 – 56
l = $\frac{64}{2}$ = 32 m.

11. Perimeter of Park= 2 (90 + 78)
= 2 × 168 = 336 m.

Chapter 16 : Pictorial representation

Exercise 16.1

1. Do yourself

2. (a) $30 \times 200 = 6000$ trees

(b) Apple trees $= 200 \times 4 = 800$

Gauva trees $= 200 \times 7 = 1400$

$1400 - 800 = 600$ trees

(c) $5 \times 200 = 1000$ trees

(d) Mango trees $= 8 \times 200 = 1600$

Apple trees $= 200 \times 4 = 800$

$1600 - 800 = 800$ trees