Chapter

1

More on Large Numbers

Let us Recall

1. (a) Five lakh twenty-five thousand six hundred twenty-four
(b) Twenty thousand two (c) One lakh fifty-seven thousand six hundred eighty-nine (d) Fifty thousand
(e) Seven lakh five thousand two hundred sixty five

2. (a) 23,170 (b) 6,15,064 (c) 70,473 (d) 2,04, 741 (e) 86,026

3. (a) 1000 (b) 90 (c) 6000 (d) 1,00,000 (e) 90,000

4. (a) 4,00,000 + 50,000 + 7000 + 600 + 30 + 2
(b) 60,000 + 5000 + 200 + 0 + 5 (c) 70,000 + 6000 + 0 + 9
(d) 80,000 + 4000 + 900 (e) 3,00,000 + 20,000 + 5000 + 400 + 20 + 4
(f) 90,000 + 3000 + 0 + 90 + 3

5. (a) 34,561 < 2,43,518 < 3,65,214<4,36,513<4,89,562
(b) 1,25,489<5,40,170<5,70,410<6,52,147<7,53,241
(c) 24,115<32,214<64,512<8,54,123<9,65,412

6. (a) 9,85,632>5,11,350>4,28,013>1,55,485>1,37,458
(b) 9,89,856>3,99,856>2,92,935>55,055>25,704
(c) 9,20,315>9,02,315>2,99,381>99,999>98,884

7. (a) 8,75,703 (b) 3,52,698 (c) 5,04,627

8. (a) > (b) > (c) < (d) > (e) > (f) >

9. (a) 5,89,671 – 1 = 5,89,670 (b) 27,510 – 1 = 27,509
(c) 7,67,890 – 1 = 7,67,889 (d) 8,56,000 – 1 = 8,55,999

10. (a) 5,23,628 + 1 = 5,23,629 (b) 85,494 + 1 = 85,495
(c) 7,75,137 + 1 = 7,75,138 (d) 69,109 + 1 = 69,110

11. (a) 31,616; 31,617; 31,618; 31,619
(b) 4,28,433; 4,28,434; 4,28,435; 4,28,436

12. (a) smallest = 24,578; greatest = 87,542
(b) smallest = 12,679; greatest = 97,621
(c) smallest = 10,579; greatest = 97,510

13. (a) 52,160 (b) 8,000

Practice Coach – 1 !

1. Do yourself **2.** (a) 5,57,52,678 = Five crore fifty-seven lakh fifty-two thousand six hundred seventy-eight (b) 1,35,72,099 = One crore thirty-five lakh seventy-two thousand ninety-nine
(c) 4,20,00,420 = Four crore twenty lakh four hundred twenty
(d) 7,07,07,315 = Seven crore seven lakh seven thousand three hundred fifteen (e) 3,45,56,130 = Three crore forty-five lakh fifty-six thousand one hundred thirty

(f) 1,81,83,356 = One crore eighty-one lakh eighty-three thousand three hundred fifty-six (g) 3,13,81,890 = Three crore thirteen lakh eighty one thousand eight hundred ninety (h) 79,28,341 = Seventy nine lakh twenty-eight thousand three hundred forty-one (i) 62,38,421 = Sixty two lakh thirty-eight thousand four hundred twenty-one

3. (a) 80,40,020 (b) 3,10,07,004 (c) 92,56,892 (d) 2,42,75,202
(e) 8,82,05,308 (f) 2,57,357 (g) 7,58,40,212

4.

	Place Value	Face Value
(a)	30,00,000	3
(b)	80,00,000	8
(c)	1,00,00,000	1
(d)	3,00,000	3
(e)	9,000	9
(f)	70,000	7
(g)	5,00,000	5
(h)	5	5
(i)	50	5

Practice Coach – 2 !

1. (a) 6,00,00,000 + 30,00,000 + 30,000 + 2,000 + 100 + 5
(b) 4,00,00,000 + 20,000 + 5,000 + 800 + 90 + 6
(c) 6,00,00,000 + 50,00,000 + 7,00,000 + 80,000 + 6,000 + 900 + 10 + 2
(d) 50,00,000 + 4,00,000 + 30,000 + 6,000 + 700 + 80 + 9
(e) 3,00,00,000 + 20,00,000 + 6,000 + 100 + 50 + 1
(f) 70,00,000 + 5,00,000 + 60,000 + 100 + 5
(g) 3,00,00,000 + 10,00,000 + 7,00,000 + 50,000 + 2,000 + 600 + 1
(h) 30,00,000 + 5,00,000 + 6,000 + 300 + 20 + 5
(i) 90,00,000 + 6,00,000 + 100 + 30 + 8

2. (a) 37,69,053 (b) 20,20,202 (c) 5,73,21,069 (d) 87,31,317
(e) 5,01,708 (f) 9,00,08,025

Practice Coach – 3 !

1. (a) > (b) = (c) > (d) < (e) < (f) = (g) > (h) =

2. (a) 87,35,952 < 87,36,952 < 87,65,952 < 87,85,952
(b) 57,32,373 < 73,13,537 < 56,34,754 < 3,46,25,722
(d) 24,11,712 < 54,72,341 < 56,34,754 < 72,61,561
(e) 5,23,718 < 67,89,542 < 2,45,78,963 < 8,79,56,423
(c) 27,93,465 < 28,63,246 < 2,04,05,060 < 3,56,52,595

3. (a) 2,72,31,445 > 75,62,436 > 46,56,531 > 36,31,468
(b) 4,69,58,472 > 82,13,475 > 8,79,564 > 8,78,254

(c) 45,31,071 > 44,52,700 > 5,26,781 > 4,52,687

(d) 8,36,58,277 > 1,55,38,244 > 54,27,425 > 12,73,253

4. (a) 97,53,210 (b) 8,75,43,210 (c) 98,54,210 (d) 87,64,321

(e) 9,86,43,210 **5.** (a) 10,23,458 (b) 12,35,679

(c) 12,36,789 (d) 20,55,678 (e) 24,56,778 (f) 10,23,578

6. Smallest 8-digit number = 1,00,00,000

Greatest number = 86,53,120

Smallest number = 10,23,568

Subtraction ⇒

$$\begin{array}{r} 10000000 \\ -\ 8653120 \\ \hline 1346880 \end{array} \qquad \begin{array}{r} 10000000 \\ -\ 1023568 \\ \hline 8976432 \end{array}$$

So, the difference ⇒ 13,46,880 and 89,76,432

7. Greatest 8-digit number = 9,99,99,999

Greatest 7-digit number = 99,99,999

Subtraction ⇒

$$\begin{array}{r} 9\,9\,9\,9\,9\,9\,9\,9 \\ -\ 9\,9\,9\,9\,9\,9\,9 \\ \hline 9\,0\,0\,0\,0\,0\,0\,0 \end{array}$$

So, the difference ⇒ 9,00,00,000

8. (a) 1,30,10,400 – 1 = 1,30,10,399 (b) 5,96,50,899 – 1 = 5,96,50,898

(c) 1,95,48,649 – 1 = 1,95,48,648 (d) 95,12,009 – 1 = 95,12,008

9. (a) 38,45,692 + 1 = 38,45,693 (b) 82,00,453 + 1 = 82,00,454

(c) 1,58,34,799 + 1 = 1,58,34,800 (d) 2,45,30,009 + 1 = 2,45,30,010

Practice Coach – 4 !

1.

	Number	Rounded to the nearest		
		10	100	1000
(a)	88,84,630	88,84,630	88,84,600	88,85,000
(b)	67,12,639	67,12,640	67,12,600	67,13,000
(c)	23,65,761	23,65,760	23,65,800	23,66,000
(d)	9,99,99,748	9,99,99,750	9,99,99,700	10,00,00,000
(e)	5,33,00,671	5,33,00,670	5,33,00,700	5,33,01,000
(f)	6,385	6,390	6,400	6,000
(g)	1,63,218	1,63,220	1,63,200	1,63,000
(h)	3,34,56,745	3,34,56,750	3,34,56,700	3,34,57,000
(i)	52,629	52,630	52,600	53,000

2. The father bought a house = ₹ 78,45,321
Round off the cost to the nearest 100 = ₹ 78,45,300

3. 8,59,872 round off to the nearest 1000 ⇒ 8,60,000
7,27,91,945 round off to the nearest 1000 ⇒ 7,27,92,000
Add the both numbers

$$\begin{array}{r} 7,27,92,000 \\ +\ \ 8,60,000 \\ \hline 7,36,52,000 \end{array}$$

4. (a) The cost of a bicycle = ₹ 1,872
The cost round off to the nearest hundreds = ₹ 1,900
(b) The number of people living in a colony = 4,743
Round off to nearest thousands = 5,000
(c) The number of cars in a city = ₹ 2,48,960
Round off to the nearest thousands = ₹ 2,49,000
(d) The cost of motorcycle = ₹ 28,485
Round off to nearest tens = ₹ 28,490

Practice Coach – 5 !

1. (a) 3,547,192 = Three million five hundred forty-seven thousand one hundred ninety-two
(b) 4,115,302 = Four million one hundred fifteen thousand three hundred two
(c) 2,573,002 = Two million five hundred seventy-three thousand two
(d) 8,200,091 = Eight million two hundred thousand ninety-one
(e) 10,004,731 = Ten million four thousand seven hundred thirty one
(f) 77,192,407 = Seventy-seven million one hundred ninety-two thousand four hundred seven

2. (a) 22,044,020 (b) 3,002,334 (c) 755,030,933 (d) 67,000,090
(e) 70,005,000 (f) 9,980,000

3. (a) The total collection from a dance show is ₹ 3,347,121.
(b) Nearly 27,483,420 foreigners visited Taj Mahal last year.
(c) The sale during festive season added up to ₹ 1,748,345.

Practice Coach – 6 !

1. (a) 710 (b) 330 (c) 55 (d) 47 (e) 305 (f) 1044 (g) 92 (h) 1098
(i) 643 (j) 800

2. (a) LXXIII (b) CMXIX (c) DCXXIII
(d) XXIV (e) MMXII (f) XXXVII (g) XLIX (h) LVI (i) LXXVII
(j) LXVIII (k) CCLXXVI (l) MXXXV (m) LII (n) MDCCCLVII

3. (a) XIV (b) MLXXVIII (c) XLIX (d) CXLVII (e) XVIII
4. (a) LVIII (b) MCCCXXIV (c) M (d) CCX (e) MLI

Mental Maths

1. 1,000,000 ÷ 100 = 10,000. So, 10,000 hundreds in one million.
2. 10,002 **3.** 10,001 **4.** True **5.** One crore twenty lakh **6.** True
7. 95 **8.** 999 **9.** XCI **10.** V and L are never repeated

Multiple Choice Questions (MCQs) :

1. (c) Ten millions **2.** (a) 1 **3.** (b) Ten millions **4.** (c) 7,642 **5.** (b) 7,56,370

Chapter 2

Operation of Large Numbers

Let us Recall

1. (a) 37,633 (b) 1,22,625 (c) 8,54,903 (d) 1,67,334 (e) 1,51,777 (f) 2,81,617
2. (a) 513 (b) 1,15,452 (c) 1,96,447 (d) 8,556
3. (a) 22,492 (b) 40,208 (c) 8,09,622 (d) 97,472
4. (a) 26 (b) 504.58 (c) 25 (d) 140
5. (a) 2,350 (b) 9,50,266 (c) 8,97,542 (d) 0 (e) Q = 56, R = 7

Practice Coach – 1 !

1. (a)
$$\begin{array}{r} 3675218 \\ +1876984 \\ \hline 5552202 \end{array}$$

(b)
$$\begin{array}{r} 6257173 \\ +4753619 \\ \hline 11010792 \end{array}$$

(c)
$$\begin{array}{r} 38256174 \\ +27842360 \\ \hline 41040410 \end{array}$$

(d)
$$\begin{array}{r} 13452672 \\ 24364790 \\ +93184530 \\ \hline 47135915 \end{array}$$

(e)
$$\begin{array}{r} 47436127 \\ 23655438 \\ +53168830 \\ \hline 76408448 \end{array}$$

(f)
$$\begin{array}{r} 3578928 \\ +475935 \\ \hline 4054863 \end{array}$$

(g)
$$\begin{array}{r} 1859231 \\ 4892193 \\ +5352476 \\ \hline 12103900 \end{array}$$

(h)
$$\begin{array}{r} 6541854 \\ 958421 \\ +452144 \\ \hline 7952419 \end{array}$$

(i)
$$\begin{array}{r} 7891253 \\ +495865 \\ \hline 8387118 \end{array}$$

(j)
$$\begin{array}{r} 6123579 \\ 5238165 \\ +72491125 \\ \hline 83852869 \end{array}$$

(k)
$$\begin{array}{r} 1825723 \\ 721938 \\ +542153 \\ \hline 3089814 \end{array}$$

(l)
$$\begin{array}{r} 75436948 \\ +3967489 \\ \hline 79404437 \end{array}$$

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

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

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

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

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

(f)
$$\begin{array}{r} 9\,8\,5\,6\,4\,7\,2\,3 \\ -\,4\,8\,5\,9\,6\,2\,3\,5 \\ \hline 4\,9\,9\,6\,8\,4\,8\,8 \end{array}$$

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

(h)
$$\begin{array}{r} 3\,5\,2\,1\,7\,9\,2 \\ -\,1\,8\,3\,9\,1\,9\,8 \\ \hline 1\,6\,8\,2\,5\,9\,4 \end{array}$$

(i)
$$\begin{array}{r} 7\,3\,5\,2\,1\,9\,2 \\ -\,8\,3\,9\,1\,8\,7 \\ \hline 6\,5\,1\,3\,0\,0\,5 \end{array}$$

(j)
$$\begin{array}{r} 5\,3\,9\,1\,8\,7\,2\,9 \\ -\,4\,3\,1\,9\,8\,5\,7 \\ \hline 4\,9\,5\,9\,8\,8\,7\,2 \end{array}$$

(k)
$$\begin{array}{r} 5\,2\,1\,5\,3\,7\,2 \\ -\,2\,5\,0\,6\,7\,8\,9 \\ \hline 2\,7\,0\,8\,5\,8\,3 \end{array}$$

(l)
$$\begin{array}{r} 8\,9\,2\,1\,8\,5\,2 \\ -\,4\,8\,5\,1\,8\,9 \\ \hline 8\,4\,3\,6\,6\,6\,3 \end{array}$$

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

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

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

(d)
$$\begin{array}{r} 8\,3\,1\,9\,4 \\ +\,3\,1\,9\,4\,2\,7\,5 \\ \hline 3\,2\,7\,7\,4\,6\,9 \\ -\,1\,2\,3\,9\,6\,4\,8 \\ \hline 2\,0\,3\,7\,8\,2\,1 \end{array}$$

(e)
$$\begin{array}{r} 7\,8\,1\,5\,9\,2\,9 \\ +\,2\,5\,2\,8\,5\,9\,1 \\ \hline 1\,0\,3\,4\,4\,5\,2\,0 \\ -\,5\,9\,7\,2\,8\,9\,1 \\ \hline 4\,3\,7\,1\,6\,2\,9 \end{array}$$

(f)
$$\begin{array}{r} 1\,5\,2\,5\,3\,7\,2 \\ +\,2\,4\,7\,8\,4\,7\,3 \\ \hline 4\,0\,0\,3\,8\,4\,5 \\ -\,2\,5\,8\,1\,6\,2\,7 \\ \hline 1\,4\,2\,2\,2\,1\,8 \end{array}$$

(g)
$$\begin{array}{r} 2\,5\,4\,2\,7\,1\,9\,1 \\ +\,\,3\,2\,5\,1\,6\,7\,8 \\ \hline 2\,8\,6\,7\,8\,8\,6\,9 \\ +\,\,5\,8\,4\,1\,9\,0\,2 \\ \hline 3\,4\,5\,2\,0\,7\,7\,1 \end{array}$$

(h)
$$\begin{array}{r} 3\,5\,2\,1\,4\,7\,8\,9 \\ +\,2\,1\,5\,7\,7\,8\,1 \\ +\,4\,2\,9\,1\,7\,8\,5 \\ \hline 4\,1\,6\,6\,4\,3\,5\,5 \\ -\,5\,5\,7\,5\,5\,1\,5 \\ \hline 3\,6\,0\,8\,8\,8\,4\,0 \end{array}$$

4. (a)
$$\begin{array}{r} 8\,2\,\boxed{4}\,4\,2\,5 \\ +\,1\,\boxed{3}\,5\,\boxed{3}\,7\,8 \\ \hline 9\,5\,9\,8\,0\,3 \end{array}$$

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

(c)
$$\begin{array}{r} 6\,6\,\boxed{7}\,7\,2\,\boxed{8}\,2 \\ +\,2\,6\,8\,\boxed{6}\,7\,3\,\boxed{9} \\ \hline 9\,\boxed{3}\,6\,4\,\boxed{0}\,2\,1 \end{array}$$

(d)
$$\begin{array}{r} 1\,\boxed{4}\,2\,4\,\boxed{6}\,5\,4 \\ +\,3\,4\,8\,\boxed{9}\,7\,\boxed{6}\,6 \\ \hline 4\,9\,\boxed{1}\,4\,4\,2\,\boxed{0} \end{array}$$

(e)
$$\begin{array}{r} 2\,9\,\boxed{8}\,\boxed{8}\,\boxed{3}\,6\,1 \\ -\,8\,9\,\boxed{7}\,2\,\boxed{9}\,2 \\ \hline 2\,\boxed{0}\,9\,1\,0\,6\,\boxed{9} \end{array}$$

(f)
$$\begin{array}{r} 2\,\boxed{8}\,9\,6\,\boxed{3}\,5\,1\,\boxed{4} \\ -\,1\,7\,\boxed{9}\,\boxed{9}\,2\,4\,\boxed{9}\,2 \\ \hline \boxed{1}\,0\,\boxed{9}\,7\,1\,\boxed{0}\,2\,2 \end{array}$$

(g)
$$\begin{array}{r} 7\,9\,\boxed{2}\,2\,8\,\boxed{8} \\ +\,\boxed{0}\,\boxed{4}\,2\,8\,\boxed{3}\,3 \\ \hline 8\,3\,5\,1\,2\,1 \end{array}$$

(h)
$$\begin{array}{r} 9\,\boxed{2}\,7\,2\,\boxed{8}\,2 \\ -\,\boxed{0}\,8\,\boxed{4}\,2\,3\,\boxed{5} \\ \hline 8\,4\,3\,0\,4\,7 \end{array}$$

5. (a) Greatest 7-digit number = 99,99,999

More than = 7,000

$$\begin{array}{r} 9\,9\,9\,9\,9\,9\,9 \\ +\,7\,0\,0\,0 \\ \hline 1\,0\,0\,0\,6\,9\,9\,9 \end{array}$$

(b) The least odd number of 6-digit = 100001

100 more than = 100001 + 100 = 100101

6. Ram bought one house = ₹ 6,16,435

He bought other house = ₹ 4,58,236

He spend money altogether = ₹ 6,16,435 + ₹ 4,58,236

= ₹ 10,74,671

$$\begin{array}{r} 6\,1\,6\,4\,3\,5 \\ +\,4\,5\,8\,2\,3\,6 \\ \hline 1\,0\,7\,4\,6\,7\,1 \end{array}$$

Thus, Ram ₹ 10,74,671 spend altogether.

7. The books of Geography in the library = 72,19,256

The books of Mathematics in the library = 6,19,005

The books of other subjects in the library = 25,16,856

The total number of books in the library

= 72,19,256 + 6,19,005 + 25,16,856

= 1,03,55,117

$$\begin{array}{r} 7\,2\,1\,9\,2\,5\,6 \\ 6\,1\,9\,0\,0\,5 \\ +\,2\,5\,1\,6\,8\,5\,6 \\ \hline 1\,0\,3\,5\,5\,1\,1\,7 \end{array}$$

Thus, there are 1,03,55,117 books in the library.

8. People entered through gate A = 6,78,54,923

People entered through gate B = 9,35,48,697

6,78,54,923 < 9,35,48,697

Thus, 2,56,93,774 extra people entered through gate B than gate A.

$$\begin{array}{r} 9\,3\,5\,4\,8\,6\,9\,7 \\ -\,6\,7\,8\,5\,4\,9\,2\,3 \\ \hline 2\,5\,6\,9\,3\,7\,7\,4 \end{array}$$

9. The largest 7-digit number = 99,99,999

The largest 6-digit number = 9,99,999

The sum of both largest number

= 99,99,999 + 9,99,999 = 1,09,99,998

$$\begin{array}{r} 9\,9\,9\,9\,9\,9\,9 \\ +\,9\,9\,9\,9\,9\,9 \\ \hline 1\,0\,9\,9\,9\,9\,9\,8 \end{array}$$

Thus, the sum of the 7-digit largest number and 6-digit largest number is 1,09,99,998.

10. 5,37,93,210 < 8,89,06,972

Thus, 3,51,13,762 should be added to 5,37,93,210 to get 8,89,06,972.

$$\begin{array}{r} 8\,8\,9\,0\,6\,9\,7\,2 \\ -\,5\,3\,7\,9\,3\,2\,1\,0 \\ \hline 3\,5\,1\,1\,3\,7\,6\,2 \end{array}$$

11. 9,66,05,398 > 4,53,98,932

Thus, we subtracted 5,12,06,466 from 9,66,05,398 to get 4,53,98,932.

$$\begin{array}{r} 9\,6\,6\,0\,5\,3\,9\,8 \\ -\,4\,5\,3\,9\,8\,9\,3\,2 \\ \hline 5\,1\,2\,0\,6\,4\,6\,6 \end{array}$$

12. Mrs. Kalpana invested in her business last year = ₹ 15,50,500

Total sales = ₹ 8,78,450

The difference between her sales and investment

= ₹ 15,50,500 – ₹ 8,78,450 = ₹ 6,72,050

Thus, the difference between her sales and investment is ₹ 6,72,050.

13. The largest 8-digit number = 9,99,99,999
The smallest 6-digit number = 10,00,000
The difference between both numbers = 9,99,99,999 – 10,00,000
= 9,89,99,999

14. The sum of two numbers = 56,12,037
If one of the number = 12,51,958
The other number = 56,12,037 – 12,51,958 = 43,60,079
Thus, the other number is 43,60,079.

15. A bulb manufacturer produces bulbs in first month = 1,99,725
The bulb manufacturer produces bulbs in second month = 10,25,950
The bulb manufacturer produces bulbs in third month = 4,55,950
The bulbs he produces in these three months
= 1,99,725 + 10,25,950 + 4,55,950 = 16,81,625
Thus, there are 16,81,625 bulbs he produces in these three months.

Practice Coach – 2 !

1. (a)
$$\begin{array}{r} 7225 \\ \times\ 167 \\ \hline 50575 \\ 433500 \\ +\ 722500 \\ \hline \boxed{1206575} \end{array}$$

(b)
$$\begin{array}{r} 7059 \\ \times\ 263 \\ \hline 21177 \\ 423540 \\ +\ 1411800 \\ \hline \boxed{1856517} \end{array}$$

(c)
$$\begin{array}{r} 4709 \\ \times\ 358 \\ \hline 37672 \\ 235450 \\ +\ 1412700 \\ \hline \boxed{1685822} \end{array}$$

(d)
$$\begin{array}{r} 1624 \\ \times\ 333 \\ \hline 4872 \\ 48720 \\ +\ 487200 \\ \hline \boxed{530792} \end{array}$$

(e)
$$\begin{array}{r} 2697 \\ \times\ 812 \\ \hline 5394 \\ 26970 \\ +\ 2157600 \\ \hline \boxed{2189964} \end{array}$$

(f)
$$\begin{array}{r} 6009 \\ \times\ 475 \\ \hline 30045 \\ 420630 \\ +\ 2403600 \\ \hline \boxed{2854275} \end{array}$$

(g)
$$\begin{array}{r} 5250 \\ \times\ 318 \\ \hline 42000 \\ 52500 \\ +\ 1575000 \\ \hline \boxed{1669500} \end{array}$$

(h)
$$\begin{array}{r} 8326 \\ \times\ 778 \\ \hline 66608 \\ 582820 \\ +\ 5828200 \\ \hline \boxed{6477628} \end{array}$$

2. (a)

$$\begin{array}{r} 2018 \\ \times\ 1648 \\ \hline 16144 \\ 80720 \\ 1210800 \\ +\ 2018000 \\ \hline \boxed{3325664} \end{array}$$

(b)

$$\begin{array}{r} 9356 \\ \times\ 2491 \\ \hline 9356 \\ 842040 \\ 3742400 \\ +\ 18712000 \\ \hline \boxed{23305796} \end{array}$$

(c)

$$\begin{array}{r} 4589 \\ \times\ 7089 \\ \hline 41301 \\ 367120 \\ 0000000 \\ +\ 32123000 \\ \hline \boxed{32531421} \end{array}$$

(d)

$$\begin{array}{r} 7485 \\ \times\ 7632 \\ \hline 14970 \\ 224550 \\ 4491000 \\ +\ 52395000 \\ \hline \boxed{57125520} \end{array}$$

(e)

$$\begin{array}{r} 1548 \\ \times\ 1526 \\ \hline 9288 \\ 30960 \\ 774000 \\ +\ 1548000 \\ \hline \boxed{2362248} \end{array}$$

(f)

$$\begin{array}{r} 3613 \\ \times\ 4586 \\ \hline 21678 \\ 289040 \\ 1806500 \\ +\ 14452000 \\ \hline \boxed{16569218} \end{array}$$

(g)

$$\begin{array}{r} 7589 \\ \times\ 4215 \\ \hline 37945 \\ 75890 \\ 1517800 \\ +\ 30356000 \\ \hline \boxed{31987635} \end{array}$$

(h)

$$\begin{array}{r} 7852 \\ \times\ 4857 \\ \hline 54964 \\ 392600 \\ 6281600 \\ +\ 31408000 \\ \hline \boxed{38137164} \end{array}$$

3. The cost of a table = ₹ 5,975
The number of total table = 864
The cost of 864 tables = ₹ 5,975 × 864
= ₹ 51,62,400

$$\begin{array}{r} 5975 \\ \times\ 864 \\ \hline 23900 \\ 358500 \\ +\ 4780000 \\ \hline \boxed{5162400} \end{array}$$

4. A bundle of rope measures = 4,587 metres
The number of total bundles of rope = 5,627
The rope in total bundles = 5,627 × 4,587 metres
= 2,58,11,049 metres
Thus, there are 2,58,11,049 metres rope in 5,627 bundles.

$$\begin{array}{r} 5627 \\ \times\ 4587 \\ \hline 39389 \\ 450160 \\ 2813500 \\ +\ 22508000 \\ \hline \boxed{25811049} \end{array}$$

5. The number of children in a school = 1,520
The school collects amount from each student = ₹ 125
The total amount collect = 1,520 × ₹ 125 = ₹ 1,90,000
Thus, the school ₹ 1,90,000 collected from 1,520 students.

$$\begin{array}{r} 1520 \\ \times\ 125 \\ \hline 7600 \\ 30400 \\ +\ 152000 \\ \hline \boxed{190000} \end{array}$$

6. A factory produces dolls in a day = 363
The number of days = 1,268
The factory will produce dolls in 1,268 days
= 1,268 × 363 = 4,60,284
Thus, the factory will produce 4,60,284 dolls in 1,268 days.

```
  1 2 6 8
×   3 6 3
-------
  3 8 0 4
  7 6 0 8 0
+ 3 8 0 4 0 0
-----------
  4 6 0 2 8 4
```

7. The largest 4-digit number = 9,999
The smallest 5-digit number = 10,000
The product of both digits = 10,000 × 9,999
= 9,99,90,000
Thus, the product of both digits is 9,99,90,000.

```
  1 0 0 0 0
×   9 9 9 9
-----------
  9 0 0 0 0
  9 0 0 0 0 0
  9 0 0 0 0 0 0
+ 9 0 0 0 0 0 0 0
-----------------
  9 9 9 9 0 0 0 0
```

8. The cost of a basket of mangoes = ₹ 1,346
The total number of baskets = 96
The cost of 96 baskets of mangoes = ₹ 1,346 × 96
= ₹ 1,29,216
Thus, the cost of 96 baskets of mangoes is ₹ 1,29,216.

```
  1 3 4 6
×   9 6
-------
  8 0 7 6
+ 1 2 1 1 4 0
-------------
  1 2 9 2 1 6
```

9. (a) 4,800 (b) 12,00,000 (c) 4,200 (d) 1,200 (e) 10,000 (f) 1,800 (g) 3,60,000 (h) 12,00,000

10. (a) 5,36,892 (b) 0 (c) 77,400 (d) 0 (e) 6,38,520 (f) 369 (g) 75,86,400 (h) 9,854

Practice Coach – 3 !

1. (a) 81) 9721 (12
−81↓
162
−162↓
01
Q = 12
R = 1

(b) 51) 5338 (104
−51↓↓
238
−204
34
Q = 104
R = 34

(c) 43) 3886 (9
−387↓
16
Q = 9
R = 16

(d) 20) 67302 (3365
−60↓
73
−60↓
130
−120↓
102
−100
02
Q = 3365
R = 2

(e) 23) 1825 (79
−161↓
215
−207
8
Q = 79
R = 8

(f) 8) 9402 (1175
−8↓
14
−8↓
60
−56↓
42
−40
2
Q = 1175
R = 2

(g) $18\overline{)45238}\,(2513$

$-36\downarrow$

92

$-90\downarrow$

23

$-18\downarrow$

58

-54

4

Q = 2513

R = 4

(h) $12\overline{)1800}\,(150$

$-12\downarrow$

60

-60

0

Q = 150

R = 0

2. (a) $42\overline{)75294}\,(1792$

$-42\downarrow$

332

$-294\downarrow$

389

$-378\downarrow$

114

-84

30

Q = 1792

R = 30

(b) $124\overline{)68572}\,(553$

$-620\downarrow$

657

$-620\downarrow$

372

-372

0

Q = 553

R = 0

(c) $31\overline{)52751}\,(1701$

$-31\downarrow$

217

$-217\downarrow$

51

-31

20

Q = 1701

R = 20

(d) $25\overline{)51755}\,(2070$

$-50\downarrow\downarrow$

175

$-175\downarrow$

5

Q = 2070

R = 5

3. Rice is required

in one day = 100 kg

The weight of total rice = 3200 kg

3200 kg rice will last in the camp = 3200 ÷ 100

= 32 days

Thus, 3200 kg rice will last in 32 days in the camp.

$100\overline{)3200}\,(32$

$-300\downarrow$

200

-200

0

4. The number of total books = 14,850

The number of boxes = 25

The number of books in each box = 14850 ÷ 25

= 594 books

Thus, there are 594 books packed in each box.

$25\overline{)14850}\,(594$

$-125\downarrow$

235

$-225\downarrow$

100

-100

0

5. The pearls are needed to make a necklace = 68
The total number of pearls = 14620
The necklaces can be made in 14620 pearls
= 14620 ÷ 68
= 215
215 necklaces can be made in 14620 pearls.

```
68 ) 14620 ( 215
   -136
     102
     -68
      340
     -340
        0
```

Mental Maths

1. 89,99,999 **2.** 0 **3.** 19,23,476 **4.** 10,00,000 **5.** 1,00,000
6. seven **7.** F **8.** 20,050 **9.** 3,686 **10.** 68

Multiple Choice Questions (MCQs) :

1. (c) 1,76,987 **2.** (c) 4,995 **3.** (a) 3,13,705 **4.** (a) 735 **5.** (a) 840

Chapter 3 Factors and Multiples

Practice Coach – 1 !

1.

Number	2	3	4	5	6	9	10
(a) 8,530	Y	N	N	Y	N	N	Y
(b) 9,132	Y	Y	Y	N	Y	N	N
(c) 8,662	Y	N	N	N	N	N	N
(d) 58,512	Y	Y	Y	N	Y	N	N
(e) 57,153	N	Y	N	N	N	N	N
(f) 8,331	N	Y	N	N	N	N	N
(g) 90,258	Y	Y	N	N	Y	N	N

2.

```
5 ) 17385 ( 3477
   -15
     23
    -20
      38
     -35
       35
      -35
        0
```

Yes, 17,385 is divisible by 5 because unit digit is 5.

3.
$$\begin{array}{r|l} 4 & 9\,6\,8\,5 \\ -8\downarrow & \\ \hline 1\,6 & \\ -1\,6\downarrow & \\ \hline 0\,8 & \\ -8\downarrow & \\ \hline 0\,5 & \\ -4 & \\ \hline 1 & \end{array} \quad 2421$$

No, 9,685 is not divisible by 4 because 9,685 is an odd number and 4 is an even number.

4. (a)
$$\begin{array}{r|l} 9 & 6\,8\,9\,7\,8 \\ -6\,3\downarrow & \\ \hline 5\,9 & \\ -5\,4\downarrow & \\ \hline 5\,7 & \\ -5\,4\downarrow & \\ \hline 3\,8 & \\ -3\,6 & \\ \hline 2 & \end{array} \quad 7664$$

No, it is not divisible by 9.

(b)
$$\begin{array}{r|l} 9 & 6\,9\,8\,7 \\ -6\,3\downarrow & \\ \hline 6\,8 & \\ -6\,3\downarrow & \\ \hline 5\,7 & \\ -5\,4 & \\ \hline 3 & \end{array} \quad 776$$

No, it is not divisible by 9.

(c)
$$\begin{array}{r|l} 9 & 8\,4\,2\,4 \\ -8\,1\downarrow & \\ \hline 3\,2 & \\ -2\,7\downarrow & \\ \hline 5\,4 & \\ -5\,4\downarrow & \\ \hline 0 & \end{array} \quad 936$$

Yes, it is divisible by 9.

(d)
$$\begin{array}{r|l} 9 & 9\,4\,0\,5 \\ -9\downarrow\downarrow & \\ \hline 4\,0 & \\ -3\,6\downarrow & \\ \hline 4\,5 & \\ -4\,5 & \\ \hline 0 & \end{array} \quad 1045$$

Yes, it is divisible by 9.

5. (a) 1 (b) 0 (c) 1 (d) 2 **6.** (a) 0 (b) 1 (c) 2 (d) 2

7. (a)
$$\begin{array}{r|l} 2 & 9\,5\,0\,4 \\ -8\downarrow & \\ \hline 1\,5 & \\ -1\,4 & \\ \hline 1\,0 & \\ -1\,0\downarrow & \\ \hline 0\,4 & \\ -4 & \\ \hline 0 & \end{array} \quad 4752$$

$$\begin{array}{r|l} 10 & 9\,5\,0\,4 \\ -9\,0\downarrow & \\ \hline 5\,0 & \\ -5\,0\downarrow & \\ \hline 0\,4 & \end{array} \quad 95$$

$$\begin{array}{r|l} 6 & 9\,5\,0\,4 \\ -6\downarrow & \\ \hline 3\,5 & \\ -3\,0\downarrow & \\ \hline 5\,0 & \\ -4\,8\downarrow & \\ \hline 2\,0 & \\ -1\,8 & \\ \hline 2 & \end{array} \quad 1583$$

9,504 is divisible by 2 and it is not divisible by 6 and 10.

(b) $2\overline{)6990}\,(3495$
$-6\downarrow$
09
$-8\downarrow$
19
$-18\downarrow$
10
-10
0

$10\overline{)6990}\,(699$
$-60\downarrow$
99
$-90\downarrow$
90
-90
0

$6\overline{)6990}\,(1165$
$-6\downarrow$
09
$-6\downarrow$
39
$-36\downarrow$
30
-30
0

6,990 is divisible by 2, 10 and 6.

(c) $2\overline{)5770}\,(2885$
$-4\downarrow$
17
$-16\downarrow$
17
$-16\downarrow$
10
-10
0

$10\overline{)5770}\,(577$
$-50\downarrow$
77
$-70\downarrow$
70
-70
0

$6\overline{)5770}\,(961$
$-54\downarrow$
37
$-36\downarrow$
10
-6
4

5,770 is divisible by 2, 10 and it is not divisible by 6.

(d) $2\overline{)59540}\,(29770$
$-4\downarrow$
19
$-18\downarrow$
15
$-14\downarrow$
14
-14
0

$10\overline{)59540}\,(5954$
$-50\downarrow$
95
$-90\downarrow$
54
$-50\downarrow$
40
-40
0

$6\overline{)59540}\,(9623$
$-54\downarrow$
55
$-54\downarrow$
14
$-12\downarrow$
20
-18
2

59,540 is divisible by 2, 10 and it is not divisible by 6.

(e) $2\overline{)2456}\,(1228$
$-4\downarrow$
04
$-4\downarrow$
05
$-4\downarrow$
16
-16
0

$10\overline{)2456}\,(245$
$-20\downarrow$
45
$-40\downarrow$
56
-50
6

$6\overline{)2456}\,(409$
$-24\downarrow\downarrow$
056
-54
2

2,456 is divisible by 2 and it is not divisible by 10 and 6.

(f) $2\overline{)8522}\,4261$

-8

05

-4

12

-12

02

-2

0

$10\overline{)8522}\,852$

-80

52

-50

22

-20

2

$6\overline{)8522}\,142$

-6

25

-24

12

-12

02

8,522 is divisible by 2 and it is not divisible by 10 and 6.

8. # = 5 because :

$5\overline{)3485}\,697$

-30

48

-45

35

-35

0

$10\overline{)3485}\,348$

-30

48

-40

85

-80

5

9. (a) True (b) True (c) False (d) True **10.** (a) Yes (b) No (c) Yes

Practice Coach – 2 !

1. 21, 35, 154, 175, 203

2. (a–iii) (b–iv) (c–i) (d–ii)

3. (a) 10, 15, 20, 25, 30, 35
(b) 22, 33, 44, 55, 66, 77
(c) 18, 27, 36, 45, 54, 63
(d) 46, 69, 92, 115, 138, 161

4. (a) 32, 56 (b) 16, 20, 24, 32

5. (a) $9\overline{)36}\,4$

-36

0

Yes

(b) $13\overline{)216}\,16$

-13

86

-78

8

No

(c) $25\overline{)125}\,5$

-125

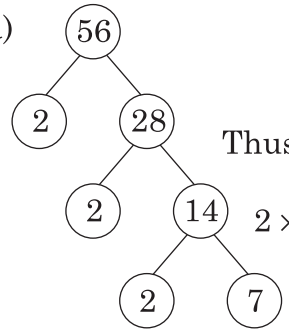
0

Yes

6. (a) 1,2,3,4,6,8,12,24
(b) 1,2,3,4,5,9,12,18,36
(c) 1,3,4,6,9,12,18,27,36,54,108
(d) 1,3,5,9,15,25,45,75,225

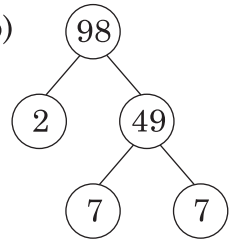
7. Prime number = 7,29,53,89
Composite Numbers = 18,21,38,46,68,77,85,99

8. (a)



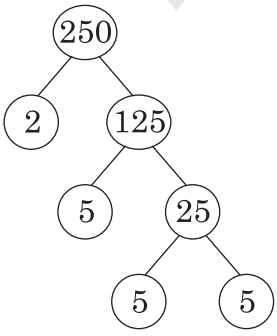
Thus, the factors of 56 is $2 \times 2 \times 2 \times 7$.

(b)



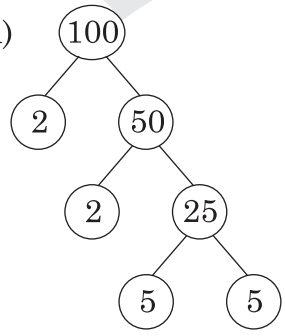
Thus, the factors of 98 is $2 \times 7 \times 7$.

(c)



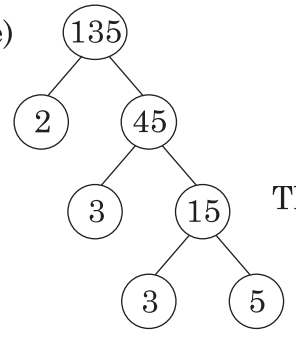
Thus, the factors of 250 is $2 \times 5 \times 5 \times 5$.

(d)



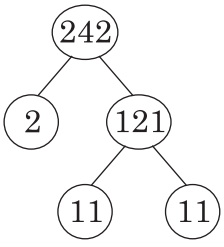
Thus, the factors of 100 is $2 \times 2 \times 5 \times 5$.

(e)



Thus, the factors of 250 is $3 \times 3 \times 3 \times 5$.

(f)



Thus, the factors of 242 is $2 \times 11 \times 11$.

9. (a) No (b) Yes (c) No

10. 151, 157, 163, 167, 173, 179, 181, 191, 193, 197 and 199.

Practice Coach – 3 !

1. (a) Prime Factorisation Method :

2	28
2	14
7	7
	7

2	42
3	21
7	7
	1

$28 = \boxed{2} \times 2 \times \boxed{7}$

$42 = \boxed{2} \times 3 \times \boxed{7}$

Therefore, the HCF of 28 and 42 is $2 \times 7 = 14$.

Using Division Method :

2	28, 42
7	14, 21
	2, 3

Therefore, the HCF of 28 and 42 is $2 \times 7 = 14$.

(b) Prime Factorisation Method :

2	36
2	18
3	9
3	3
	1

2	96
2	48
2	24
2	12
2	6
3	3
	1

$36 = \boxed{2} \times \boxed{2} \times 3 \times \boxed{3}$

$96 = \boxed{2} \times \boxed{2} \times 2 \times 2 \times 2 \times \boxed{3}$

Therefore, the HCF of 36 and 96 is $2 \times 2 \times 3 = 12$.

Using Division Method :

2	36, 96
2	18, 48
3	9, 24
	3, 8

Therefore, the HCF of 36 and 96 is $2 \times 2 \times 3 = 12$.

(c) Prime Factorisation Method :

2	42
3	21
7	7
	1

3	63
3	21
7	7
	1

$42 = 2 \times \boxed{3} \times \boxed{7}$
$63 = 3 \times \boxed{3} \times \boxed{7}$

Therefore, the HCF of 42 and 63 is $3 \times 7 = 21$.

Using Division Method :

3	42, 63
7	14, 21
	2, 3

Thus, the HCF of 42 and 63 is $3 \times 7 = 21$.

(d) Prime Factorisation Method :

2	12
2	6
3	3
	1

2	28
2	14
7	7
	1

$12 = \boxed{2} \times \boxed{2} \times 3$
$28 = \boxed{2} \times \boxed{2} \times 7$

Thus, the HCF of 12 and 28 is $2 \times 2 = 4$.

Using Division Method :

2	12, 28
2	6, 14
	3, 7

Thus, the HCF of 12 and 28 is $2 \times 2 = 4$.

(e) Prime Factorisation Method :

2	42
3	21
7	7
	1

2	330
3	165
5	55
11	11
	1

$42 = \boxed{2} \times \boxed{3} \times 7$
$330 = \boxed{2} \times \boxed{3} \times 5 \times 11$

Thus, the HCF of 42 and 330 is $2 \times 3 = 6$.

Using Division Method :

2	42, 330
3	21, 165
	7, 55

Thus, the HCF of 42 and 330 is $2 \times 3 = 6$.

(f) Prime Factorisation Method :

2	78
3	39
13	13
	1

2	210
3	105
5	35
7	7
	1

$78 = \boxed{2} \times \boxed{3} \times 13$
$210 = \boxed{2} \times \boxed{3} \times 5 \times 7$

Thus, the HCF of 78 and 210 is $2 \times 3 = 6$.

Using Division Method :

2	78, 210
3	39, 105
13	13, 35
5	1, 35
	1, 7

Thus, the HCF of 78 and 210 is $2 \times 3 = 6$.

(g) Prime Factorisation Method :

2	24
2	12
2	6
3	3
	1

5	35
7	7
	1

$24 = 2 \times 2 \times 2 \times 3$

$35 = 5 \times 7$

Thus, the HCF of 24 and 35 is 1.

Using Division Method :

2	24, 35
2	12, 35
2	6, 35
3	3, 35
5	1, 35
7	1, 7
	1, 1

Thus, the HCF of 24 and 35 is 1.

(h) Prime Factorisation Method :

2	36
2	18
3	9
3	3
	1

2	252
2	126
3	63
3	21
7	7
	1

$36 = \boxed{2} \times \boxed{2} \times \boxed{3} \times \boxed{3}$

$252 = \boxed{2} \times \boxed{2} \times \boxed{3} \times \boxed{3} \times 7$

Thus, the HCF of 36 and 252 is $2 \times 2 \times 3 \times 3 = 36$.

Using Division Method :

2	36, 252
2	18, 126
3	9, 63
3	3, 27
	1, 7

Thus, the HCF of 36 and 252 is $2 \times 2 \times 3 \times 3 = 36$.

(i) Prime Factorisation Method :

2	44
2	22
11	11
	1

2	60
2	30
3	15
5	5
	1

$44 = \boxed{2} \times \boxed{2} \times 11$

$60 = \boxed{2} \times \boxed{2} \times 3 \times 5$

Thus, the HCF of 44 and 60 is $2 \times 2 = 4$.

Using Division Method :

2	44, 60
2	22, 30
11	11, 15
	1, 15

Thus, the HCF of 44 and 60 is $2 \times 2 = 4$.

(j) Prime Factorisation Method :

2	12
2	6
3	3
	1

2	18
3	9
3	3
	1

3	27
3	9
3	3
	1

$12 = 2 \times 2 \times \boxed{3}$
$18 = 2 \times 3 \times \boxed{3}$
$27 = 3 \times 3 \times \boxed{3}$

Thus, the HCF of 12, 18 and 27 is 3.

Using Division Method :

3	12, 18, 27
2	4, 6, 9
	2, 3, 9

Thus, the HCF of 12, 18 and 27 is 3.

(k) Prime Factorisation Method :

2	22
11	11
	1

2	66
3	33
11	11
	1

11	121
11	11
	1

$22 = 2 \times \boxed{11}$
$66 = 2 \times 3 \times \boxed{11}$
$121 = 11 \times \boxed{11}$

Thus, the HCF of 22, 66 and 121 is 11.

Using Division Method :

11	22, 66, 121
11	2, 6, 11
	2, 6, 1

Thus, the HCF of 22, 66 and 121 is 11.

(l) Prime Factorisation Method :

5	25
5	5
	1

5	65
13	13
	1

5	95
19	19
	1

$22 = \boxed{5} \times 5$
$65 = \boxed{5} \times 13$
$95 = \boxed{5} \times 19$

Thus, the HCF of 25, 65 and 95 is 5.

Using Division Method :

5	25, 65, 95
	5, 13, 19

Thus, the HCF of 25, 65 and 95 is 5.

(m) Prime Factorisation Method :

2	18
3	9
3	3
	1

2	24
2	12
2	6
3	3
	1

2	32
2	16
2	8
2	4
2	2
	1

$18 = \boxed{2} \times 3 \times 3$
$24 = \boxed{2} \times 2 \times 2 \times 3$
$32 = \boxed{2} \times 2 \times 2 \times 2 \times 2$

Thus, the HCF of 18, 24 and 32 is 2.

Using Division Method :

2	18, 24, 32
	9, 12, 16

Thus, the HCF of 18, 24 and 32 is 2.

(n) Prime Factorisation Method :

2	64
2	32
2	16
2	8
2	4
2	2
	1

2	80
2	40
2	20
2	10
5	5
	1

2	120
2	60
2	30
3	15
5	5
	1

$64 = \boxed{2} \times \boxed{2} \times \boxed{2} \times 2 \times 2 \times 2$

$80 = \boxed{2} \times \boxed{2} \times \boxed{2} \times 2 \times 5$

$120 = \boxed{2} \times \boxed{2} \times \boxed{2} \times 3 \times 5$

Thus, the HCF of 64, 80 and 120 is $2 \times 2 \times 2 = 8$.

Using Division Method :

2	64, 80, 120
2	32, 40, 60
2	16, 20, 30
	8, 10, 15

Thus, the HCF of 64, 80 and 120 is $2 \times 2 \times 2 = 8$.

(o) Prime Factorisation Method :

2	108
2	54
3	27
3	9
3	3
	1

2	136
2	68
2	34
17	17
	1

2	152
2	76
2	38
19	19
	1

$108 = \boxed{2} \times \boxed{2} \times 3 \times 3 \times 3$

$136 = \boxed{2} \times \boxed{2} \times 2 \times 17$

$152 = \boxed{2} \times \boxed{2} \times 2 \times 19$

Thus, the HCF of 108, 136 and 152 is $2 \times 2 = 4$.

Using Division Method :

2	108, 136, 152
2	54, 68, 76
	27, 34, 38

Thus, the HCF of 108, 136 and 152 is $2 \times 2 = 4$.

2.

2	108, 144, 216
2	54, 72, 108
3	27, 36, 54
3	9, 12, 18
	3, 4, 6

Thus, the HCF of 108, 144 and 216 is $2 \times 2 \times 3 \times 3 = 36$.

Thus, 36 is the greatest number that will divide 108, 144 and 216 without leaving any remainder.

3.

7	35, 63
	5, 9

Thus, 7 m is the greatest length of a scale that can be used to exactly measure 35 m and 63 m of clothes.

4.

2	120, 180, 240
2	60, 90, 120
3	30, 45, 60
5	10, 15, 20
	2, 3, 4

Thus, the HCF of 120, 180 and 240 is $2 \times 2 \times 3 \times 5 = 60$.
Thus, 60 litres is the capacity of the greatest container which can be used to measure this oil exactly.

5. We know that 1 m = 100 cm then,

(i) 14 m 25 cm = 14 m + 25 cm

14 m = 14×100 cm = 1400 cm

14 m 25 cm = 1400 cm + 25 cm = 1425 cm

(ii) 5 m 50 cm = 5 m + 50 cm

5 m = 5×100 cm = 500 cm

5 m 50 cm = 500 cm + 50 cm = 550 cm

(iii) 6 m

6 m = 6×100 cm = 600 cm

So, the dimensions of a hall are 1425 cm, 550 cm and 600 cm.

5	1425, 550, 600
5	285, 110, 120
	57, 22, 24

Thus, the HCF of 1425 cm, 550 cm and 600 cm is $5 \times 5 = 25$ cm.

Practice Coach – 4 !

1. (a)

2	72, 96
2	36, 48
2	18, 24
2	9, 12
2	9, 6
3	9, 3
3	3, 1
	1, 1

LCM = $2 \times 2 \times 2 \times 2 \times 2 \times 3 \times 3 = 288$

(b)

7	49, 147
7	7, 21
3	1, 3
	1, 1

LCM = $7 \times 7 \times 3 = 147$

(c)

5	35, 75
5	7, 15
3	7, 3
7	7, 1
	1, 1

LCM = $5 \times 5 \times 3 \times 7 = 525$

(d)

2	108, 144
2	54, 72
2	27, 36
2	27, 18
3	27, 9
3	9, 3
3	3, 1
	1, 1

LCM = $2 \times 2 \times 2 \times 2 \times 3 \times 3 \times 3 = 432$

(e)

2	36, 54
2	18, 27
3	9, 27
3	3, 9
3	1, 3
	1, 1

LCM = $2 \times 2 \times 3 \times 3 \times 3$
= 108

(f)

2	112, 128
2	56, 64
2	28, 32
2	14, 16
2	7, 8
2	7, 4
2	7, 2
7	7, 1
	1, 1

LCM = $2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 7$
= 896

(g)

3	63, 81
3	21, 27
3	7, 9
3	7, 3
7	7, 1
	1, 1

LCM = $3 \times 3 \times 3 \times 3 \times 7$
= 567

(h)

2	52, 78
3	26, 39
13	26, 13
2	2, 1
	1, 1

LCM = $2 \times 3 \times 13 \times 2$
= 156

(i)

3	150, 225
5	50, 85
2	12, 17
2	6, 17
3	3, 17
17	1, 17
	1, 1

LCM = $3 \times 5 \times 2 \times 2 \times 3 \times 17$
= 3060

(j)

2	10, 25, 30
3	5, 25, 15
5	5, 25, 5
5	1, 5, 1
	1, 1, 1

LCM = $2 \times 3 \times 5 \times 5$
= 150

(k)

2	48, 64, 96
2	24, 32, 48
2	12, 16, 24
2	6, 8, 12
2	3, 4, 6
2	3, 2, 3
3	3, 1, 3
	1, 1, 1

LCM = $2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 3$
= 192

(l)

2	64, 120, 128
2	32, 60, 64
2	16, 30, 32
2	8, 15, 16
2	4, 15, 8
2	2, 15, 4
2	1, 15, 2
3	1, 15, 1
5	1, 5, 1
	1, 1, 1

LCM = $2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 3 \times 5$
= 1920

(m)

2	65, 130, 260
2	65, 65, 130
5	65, 65, 65
13	13, 13, 13
	1, 1, 1

LCM = $2 \times 2 \times 5 \times 13 = 260$

(n)

2	72, 108, 120
2	36, 54, 60
2	18, 27, 30
3	9, 27, 15
3	3, 9, 5
3	1, 3, 5
5	1, 1, 5
	1, 1, 1

LCM = $2 \times 2 \times 2 \times 3 \times 3 \times 3 \times 5 = 1080$

(o)

2	20, 35, 105
2	10, 35, 105
3	5, 35, 105
5	5, 35, 35
7	1, 7, 7
	1, 1, 1

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

2.

2	10, 15, 20
2	5, 15, 10
3	5, 15, 5
5	5, 5, 5
	1, 1, 1

LCM = $2 \times 2 \times 3 \times 5 = 60$ min

60 min = 1 hour

Thus, they change 10:00 am together again.

Mental Maths

1. 1 **2.** only 2 **3.** A prime number has exactly two factors, 1 and itself.
4. True **6.** 2550 **7.** 5100
8. There are 25 prime numbers between 1 and 100. They are 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71, 73, 79, 83, 89 and 97.
9. 73, 79 **10.** 4230

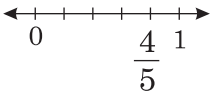
Multiple Choice Questions (MCQs) :

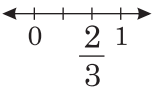
1. (b) has exactly two factors **2.** (a) 2 **3.** (b) 120 **4.** (a) 5,25 **5.** (b) 5886

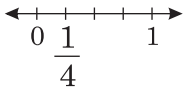
Chapter 4 Fractions

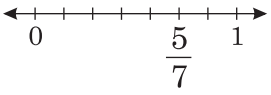
Let us Recall

1. (a) $\frac{1}{4}$ (b) $\frac{2}{4}$ (c) $\frac{3}{10}$ (d) $\frac{4}{10}$ **2.** (b) and (d) **3.** (a) (i) $5\frac{3}{4}$ (ii) $3\frac{4}{5}$
(b) (i) $\frac{3}{2}$ (ii) $\frac{31}{6}$ **4.** (a) $\frac{3}{6} = \frac{1}{2}$ (b) $\frac{6}{9} = \frac{2}{3}$ (c) $\frac{4}{10} = \frac{2}{5}$ (d) $\frac{3}{12} = \frac{1}{4}$ (e) $\frac{5}{15} = \frac{1}{3}$

5. (a) 

(b) 

(c) 

(d) 

6. (a) $\frac{12}{18} + \frac{8}{18} = \frac{12+8}{18} = \frac{20}{18}$ (b) $\frac{14}{32} + \frac{1}{32} = \frac{9}{32} = \frac{14+1+9}{32} = \frac{24}{32}$

(c) $\frac{17}{25} - \frac{7}{25} = \frac{17-7}{25} = \frac{10}{25}$ (d) $\frac{19}{21} - \frac{8}{21} = \frac{19-8}{21} = \frac{11}{21}$

7. $\frac{5}{12}$ **8.** (a) $7\frac{1}{6}$ (b) $4\frac{5}{8}$ (c) $11\frac{1}{5}$ (d) $9\frac{6}{7}$ (e) $13\frac{2}{3}$ (f) $1\frac{2}{9}$

Practice Coach – 1 !

1. (a) $\frac{4}{7} = \frac{3}{3} \times \frac{4}{7} = \frac{12}{21}$ (b) $\frac{22}{7} = \frac{3}{3} \times \frac{22}{7} = \frac{66}{21}$ (c) $\frac{3}{8} = \frac{3}{3} \times \frac{3}{8} = \frac{9}{24}$

(d) $\frac{18}{5} = \frac{3}{3} \times \frac{18}{5} = \frac{54}{15}$ (e) $\frac{18}{19} = \frac{3}{3} \times \frac{18}{19} = \frac{54}{57}$ (f) $\frac{11}{7} = \frac{3}{3} \times \frac{11}{7} = \frac{33}{21}$

(g) $\frac{3}{5} = \frac{3}{3} \times \frac{3}{5} = \frac{9}{15}$ (h) $\frac{41}{5} = \frac{3}{3} \times \frac{41}{5} = \frac{123}{15}$ **2.** (a–ii), (b–iv), (c–i), (d–iii)

3. (a) $\frac{4}{16} = \frac{5}{20} = \frac{6}{24}$ (b) $\frac{4}{20} = \frac{5}{25} = \frac{6}{30}$ (c) $\frac{4}{32} = \frac{5}{40} = \frac{6}{48}$

(d) $\frac{4}{36} = \frac{5}{45} = \frac{6}{54}$ **4.** (a) $\frac{2}{3}$ (b) $\frac{2}{3}$ (c) $\frac{5}{8}$ (d) $\frac{3}{4}$ (e) $\frac{2}{3}$ (f) $\frac{7}{9}$ (g) $\frac{2}{5}$

(h) $\frac{5}{8}$ **5.** (a) $\frac{1}{2}$ (b) $\frac{1}{3}$ (c) $\frac{3}{4}$ (d) $\frac{4}{5}$ **6.** (a) $\frac{1}{3}$ (b) $\frac{5}{11}$ (c) $\frac{1}{6}$ (d) $\frac{1}{13}$ (e) $\frac{1}{5}$ (f) $\frac{3}{8}$

Practice Coach – 2 !

1. (a) < (b) > (c) = (d) > (e) < (f) = (g) > (h) > (i) > (j) > (k) < (l) >

2. (a) $\frac{3}{4}$ $\frac{2}{4}$ $\boxed{3\times4}$ $\boxed{4\times2}$ 12 > 8 (b) $\frac{4}{9}$ $\frac{7}{9}$ $\boxed{4\times9}$ $\boxed{9\times7}$ 36 < 63 (c) $\frac{6}{7}$ $\frac{6}{11}$ $\boxed{6\times11}$ $\boxed{7\times6}$ 66 > 42 (d) $\frac{14}{15}$ $\frac{14}{17}$ $\boxed{14\times17}$ $\boxed{15\times14}$ 238 > 210

(e) $\frac{5}{16}$ $\frac{5}{12}$ $\boxed{5\times12}$ $\boxed{16\times5}$ 60 < 80 (f) $\frac{4}{5}$ $\frac{12}{15}$ $\boxed{4\times15}$ $\boxed{5\times12}$ 60 = 60 (g) $\frac{5}{6}$ $\frac{11}{12}$ $\boxed{5\times12}$ $\boxed{6\times11}$ 60 < 66 (h) $\frac{1}{8}$ $\frac{3}{4}$ $\boxed{1\times4}$ $\boxed{8\times3}$ 4 < 24

3. (a) $\frac{2}{12} < \frac{5}{12} < \frac{10}{12}$ (b) $\frac{6}{13} < \frac{6}{11} < \frac{6}{7}$ (c) $\frac{8}{15} < \frac{8}{13} < \frac{8}{9}$ (d) $\frac{4}{7} < \frac{9}{14} < \frac{3}{4}$

(e) $\frac{4}{15} < \frac{3}{10} < \frac{2}{5}$ (f) $\frac{7}{12} < \frac{3}{4} < \frac{5}{6}$ (g) $\frac{1}{2} < \frac{5}{9} < \frac{2}{3}$ (h) $\frac{2}{8} < \frac{1}{3} < \frac{6}{5}$

4. (a) $\frac{11}{6} > \frac{5}{16} > \frac{3}{16}$ (b) $\frac{9}{11} > \frac{9}{15} > \frac{9}{17}$ (c) $\frac{10}{11} > \frac{10}{19} > \frac{10}{21}$ (d) $\frac{5}{6} > \frac{7}{9} > \frac{2}{3}$

(e) $\frac{6}{5} > \frac{1}{3} > \frac{2}{8}$ (f) $\frac{5}{4} > \frac{2}{3} > \frac{1}{9}$ (g) $\frac{7}{8} > \frac{2}{3} > \frac{3}{5}$ (h) $\frac{1}{3} > \frac{1}{4} > \frac{2}{9}$

Practice Coach – 3 !

1. (a) $\frac{2}{5} + \frac{1}{5} = \frac{2+1}{5} = \frac{3}{5}$ (b) $\frac{2}{3} + \frac{4}{9} = \frac{18+12}{27} = \frac{30}{27} = \frac{10}{9}$

(c) $\frac{3}{10} + \frac{2}{10} = \frac{3+2}{10} = \frac{5}{10} = \frac{1}{2}$ (d) $\frac{3}{10} + \frac{3}{11} = \frac{33+30}{110} = \frac{63}{110}$

(e) $\frac{5}{7} + \frac{2}{5} = \frac{25+14}{35} = \frac{39}{35}$ (f) $\frac{2}{9} + \frac{3}{5} = \frac{10+27}{45} = \frac{37}{45}$

(g) $7 + \frac{3}{5} = \frac{5\times7+3}{5} = \frac{38}{5}$ (h) $\frac{7}{16} + \frac{3}{16} + \frac{5}{16} = \frac{7+3+5}{16} = \frac{15}{16}$

(i) $3\frac{2}{3} + \frac{1}{3} = \frac{3\times3+2}{3} + \frac{1}{3} = \frac{11+1}{3} = \frac{12}{3} = 4$

(j) $\frac{9}{11} + \frac{1}{3} + \frac{1}{2} = \frac{54+22+33}{66} = \frac{109}{66}$

(k) $2\frac{1}{2} + 3\frac{1}{4} = \frac{2\times2+1}{2} + \frac{4\times3+1}{4} = \frac{5}{2} + \frac{13}{4} = \frac{20+26}{8} = \frac{46}{8} = \frac{23}{4}$

(l) $1\frac{1}{10} + 2\frac{1}{5} = \frac{10\times1+1}{10} + \frac{5\times2+1}{5} = \frac{11}{10} + \frac{11}{5} = \frac{55+110}{50} = \frac{165}{50} = \frac{33}{10}$

(m) $\frac{5}{9} + \frac{1}{3} + \frac{5}{6} = \frac{90+54+135}{162} = \frac{279}{162} = \frac{93}{54}$ (n) $\frac{2}{4} + \frac{3}{4} = \frac{2+3}{4} = \frac{5}{4}$

(o) $8\frac{8}{5} + 7\frac{3}{4} = \frac{5\times8+8}{5} + \frac{4\times7+3}{4} = \frac{48}{5} + \frac{31}{4} = \frac{192+155}{20} = \frac{347}{20}$

(p) $4\frac{2}{9} + 7 = 4\frac{2}{9} + \frac{7}{1} = \frac{9\times4+2}{9} + \frac{7}{1} = \frac{38}{9} + \frac{7}{1} = \frac{36+63}{9} = \frac{101}{9} = 11\frac{2}{9}$

(q) $\frac{4}{13} + \frac{2}{13} + \frac{5}{13} = \frac{4+2+5}{13} = \frac{11}{13}$ (r) $\frac{3}{10} + \frac{1}{4} = \frac{12+10}{40} = \frac{22}{40} = \frac{11}{20}$

(s) $\frac{1}{7} + \frac{5}{14} = \frac{14+35}{98} = \frac{49}{98} = \frac{7}{14}$

(t) $3\frac{1}{3} + 2\frac{1}{4} = \frac{3\times3+1}{3} + \frac{4\times2+1}{4} = \frac{10}{10} + \frac{9}{4} = \frac{30+27}{12} = \frac{57}{12} = \frac{19}{4}$

2. Rashi bought sugar = $7\frac{1}{2}$

She bought rice = $3\frac{1}{4}$

She bought pulses = $2\frac{1}{2}$

The total weight she carried $= 7\frac{1}{2} + 3\frac{1}{4} + 2\frac{1}{2} = \frac{15}{2} + \frac{13}{4} + \frac{5}{2}$

$= \frac{60+26+20}{8} = \frac{106}{8} = \frac{53}{4} = 13\frac{1}{4}$

Thus, $13\frac{1}{4}$ kg was the total weight she carried.

3. The milmman added water $= \frac{9}{14}$ l.

He added milk $= \frac{2}{7}$ l

The total amount of mixture $= \frac{9}{14} + \frac{2}{7} = \frac{9+4}{14} = \frac{13}{14}$ l

Thus, the total amount of mixture was $\frac{13}{14}$ litre.

4. Anshu painted $= \frac{3}{4}$th of the wall

Sonal painted $= \frac{1}{16}$th of the wall

The wall they did paint altogether $= \frac{3}{4} + \frac{1}{16} = \frac{12+1}{16} = \frac{13}{16}$

Thus, they painted $\frac{13}{16}$th of the wall altogether .

5. Rekha filled $= \frac{2}{5}$th of the bucket

Poonam filled $= \frac{1}{3}$rd of the bucket.

Riya filled $= \frac{1}{10}$th of the bucket.

The total bucket is filled with milk $= \frac{2}{5} + \frac{1}{3} + \frac{1}{10} = \frac{60+50+15}{150}$

$= \frac{125}{150} = \frac{5}{6}$

Thus, $\frac{5}{6}$th of the total bucket is filled with milk.

Practice Coach – 4 !

1. (a) $\frac{4}{11} - \frac{3}{11} = \frac{4-3}{11} = \frac{1}{11}$ (b) $\frac{7}{11} - \frac{1}{8} = \frac{56-11}{88} = \frac{45}{88}$

(c) $3\frac{3}{4} - 2\frac{1}{8} = \frac{15}{4} - \frac{17}{8} = \frac{120-68}{32} = \frac{52}{32} = \frac{13}{8}$ (d) $\frac{7}{8} - \frac{5}{7} = \frac{49-40}{56} = \frac{9}{56}$

(e) $10\frac{7}{10} - 5\frac{3}{4} = \frac{107}{10} - \frac{23}{4} = \frac{428-230}{40} = \frac{198}{40} = \frac{99}{20}$

(f) $4\frac{1}{4}-3\frac{2}{3}=\frac{17}{4}-\frac{11}{3}=\frac{51-44}{12}=\frac{7}{12}$

(g) $7-\frac{1}{7}=\frac{7}{1}-\frac{1}{7}=\frac{49}{7}-\frac{1}{7}-\frac{49-1}{7}=\frac{48}{7}$

(h) $\frac{7}{8}-\frac{3}{4}=\frac{28-24}{32}=\frac{4}{32}=\frac{1}{8}$ (i) $\frac{3}{4}-\frac{1}{3}=\frac{9-4}{12}=\frac{5}{12}$

(j) $10-5\frac{1}{5}=\frac{10}{1}-\frac{26}{5}=\frac{50}{5}-\frac{26}{5}=\frac{50-26}{5}=\frac{24}{5}$ (k) $\frac{3}{8}-\frac{1}{8}=\frac{3-1}{8}=\frac{2}{8}=4$

(l) $7-5\frac{2}{5}=\frac{7}{1}-\frac{27}{5}=\frac{35}{5}-\frac{27}{5}=\frac{35-27}{5}=\frac{8}{5}$

(m) $6\frac{2}{3}-4=\frac{20}{3}-\frac{4}{1}=\frac{20}{3}-\frac{12}{3}=\frac{20-12}{3}=\frac{8}{3}$ (n) $\frac{1}{5}-\frac{1}{6}=\frac{6-5}{30}=\frac{1}{30}$

(o) $9\frac{3}{8}-4\frac{5}{12}=\frac{75}{8}-\frac{53}{12}=\frac{900-424}{96}=\frac{476}{96}=\frac{119}{24}=4\frac{23}{24}$

(p) $2\frac{1}{5}-1\frac{1}{8}=\frac{11}{5}-\frac{9}{8}=\frac{88-45}{40}=\frac{43}{40}=1\frac{3}{40}$

(q) $2\frac{4}{7}-1\frac{1}{2}=\frac{18}{7}-\frac{3}{2}=\frac{36-21}{14}=\frac{15}{14}=1\frac{1}{14}$

(r) $6\frac{3}{4}-2\frac{1}{10}=\frac{27}{4}-\frac{21}{10}=\frac{270-84}{40}-\frac{186}{40}=\frac{93}{20}=4\frac{13}{20}$

(s) $\frac{4}{6}-\frac{2}{12}=\frac{8-2}{12}=\frac{6}{12}=\frac{1}{2}$ (t) $\frac{15}{16}-\frac{1}{6}=\frac{90-16}{96}=\frac{74}{96}=\frac{37}{48}$

2. Sameer had money $=₹17\frac{1}{2}$

He spent money in buying a pen $=₹9\frac{1}{4}$

The money is left with him $=17\frac{1}{2}-9\frac{1}{4}=\frac{35}{2}-\frac{37}{4}=\frac{140-74}{8}=\frac{66}{8}$

$=8\frac{2}{8}$

Thus, $8\frac{2}{8}$ money is left with him.

3. Total weight of Lalit and Anuj $=33\frac{5}{6}$ kg

If the weight of Lalit $=15\frac{5}{6}$ kg

Then, the weight of Anuj $=33\frac{5}{6}-15\frac{5}{6}=\frac{203}{6}-\frac{95}{6}=\frac{203-95}{6}=\frac{108}{6}$

$=18$ kg

Thus, the weight of Anuj is 18 kg.

4. Jyotsna travels by walking $= 2\frac{3}{4}$ km $= \frac{11}{4}$ km

Jyotsna travels by car $= 3\frac{1}{8}$ km $= \frac{25}{8}$ km

She was more travel by car because $\frac{11}{4} < \frac{25}{8}$.

So, $\frac{25}{8} - \frac{11}{4} = \frac{25-22}{8} = \frac{3}{8}$ km

Thus, she covers $\frac{3}{8}$ km more distance by car than walking.

5. The paint in a tin = 10 litres.

The paint used for painting $= 7\frac{1}{8}$ litres

The paint is left in the tin $= \frac{10}{1} - 7\frac{1}{8} = \frac{10}{1} - \frac{57}{8} = \frac{80}{8} - \frac{57}{8} = \frac{80-57}{8}$

$= \frac{23}{8}$

Thus, $\frac{23}{8}$ litres of paint is left in the tin.

Practice Coach – 5 !

1. (a) $\frac{7}{8} \times 1 = \frac{7}{8} \times \frac{1}{1} = \frac{7}{8}$ (b) $3\frac{1}{8} \times \frac{1}{2} = \frac{25}{8} \times \frac{1}{2} = \frac{25}{16}$ (c) $\frac{\cancel{5}^{1}}{\cancel{9}_{3}} \times \frac{\cancel{3}^{1}}{\cancel{5}_{1}} = \frac{1}{3}$

(d) $\frac{4}{\cancel{9}_{3}} \times \frac{\cancel{3}^{1}}{11} = \frac{4 \times 1}{3 \times 11} = \frac{4}{33}$ (e) $\frac{3}{\cancel{8}_{2}} \times \frac{\cancel{4}^{1}}{5} = \frac{3 \times 1}{2 \times 5} = \frac{3}{10}$ (f) $\frac{9}{11} \times 0 = 0$

(g) $\frac{\cancel{8}^{2}}{\cancel{9}_{3}} \times \frac{\cancel{5}^{1}}{\cancel{4}_{1}} = \frac{2}{3}$ (h) $\frac{4}{5} \times \frac{1}{1} = \frac{4}{5}$ (i) $9 \times \frac{5}{6} = \frac{\cancel{9}^{3}}{1} \times \frac{5}{\cancel{6}_{2}} = \frac{3 \times 5}{2} = \frac{15}{2}$

(j) $\frac{19}{13} \times 0 = 0$ (k) $\frac{3}{\cancel{8}_{2}} \times \frac{\cancel{4}^{1}}{19} = \frac{3 \times 1}{2 \times 19} = \frac{3}{38}$ (l) $\frac{8}{\cancel{9}_{3}} \times \frac{\cancel{12}^{4}}{13} = \frac{8 \times 4}{3 \times 13} = \frac{32}{39}$

(m) $5\frac{1}{2} \times 2\frac{1}{3} = \frac{11}{2} \times \frac{7}{3} = \frac{77}{6}$ (n) $2\frac{1}{8} \times 3\frac{1}{5} = \frac{17}{\cancel{18}_{9}} \times \frac{\cancel{16}^{8}}{5} = \frac{17 \times 8}{9 \times 5} = \frac{34}{5}$

(o) $4\frac{1}{4} \times \frac{3}{17} = \frac{\cancel{17}}{4} \times \frac{3}{\cancel{17}} = \frac{3}{4}$ (p) $1\frac{1}{2} \times 9\frac{2}{\cancel{3}} = \frac{\cancel{3}}{2} \times \frac{29}{3} = \frac{29}{2}$

(q) $4\frac{1}{5} \times 2\frac{3}{4} = \frac{21}{5} \times \frac{11}{4} = \frac{231}{20} = 11\frac{11}{20}$

(r) $2\frac{4}{5} \times 1\frac{7}{8} = \frac{\cancel{14}^{7}}{\cancel{5}_{1}} \times \frac{\cancel{15}^{3}}{\cancel{8}_{4}} = \frac{7 \times 3}{1 \times 4} = \frac{21}{4}$

2. (a) $2\frac{1}{3}$ of $4\frac{1}{5} = 4\frac{1}{5} \times 2\frac{1}{3} = \frac{21}{5} \times \frac{7}{3} = \frac{147}{15} = \frac{49}{3}$

(b) $3\frac{1}{5}$ of $\frac{1}{23} = \frac{1}{23} \times \frac{16}{5} = \frac{16}{115}$

(c) $3\frac{3}{7}$ of $2\frac{4}{5} = 2\frac{4}{5} \times 3\frac{3}{7} = \frac{14}{5} \times \frac{24}{7} = \frac{336}{35} = \frac{48}{5}$

(d) $\frac{1}{8}$ of $3\frac{1}{5} = 3\frac{1}{5} \times \frac{1}{8} = \frac{16}{5} \times \frac{1}{8} = \frac{16}{40} = \frac{2}{5}$ (e) $\frac{1}{3}$ of $4\frac{1}{2} = \frac{9}{2} \times \frac{1}{3} = \frac{9}{6} = \frac{3}{2}$

3. Binny bought apples = 8

The apples were rotten = $\frac{1}{4}$ of $8 = \frac{8}{1} \times \frac{1}{4} = \frac{8}{4} = 2$ apples

Thus, 2 apples were rotten.

4. Urvashi jogs in a day = $\frac{3}{4}$ km

The number of days = 16 days

She jogs in 16 days = $\frac{3}{4} \times 16 = \frac{3}{4} \times \frac{16}{1} = \frac{48}{4} = 12$ km

Thus, Urvashi jogs 12 km in 16 days.

5. A book contain pages = 312

The book has pictures = $\frac{1}{6}$th pages of the book

The pages have pictures in the book = $312 \times \frac{1}{6} = \frac{312}{1} \times \frac{1}{6} = \frac{312}{6}$

= 52 pages

Thus, 52 pages have pictures in the book.

6. The cost of 1 litre shake = $11\frac{1}{10}$

The total shake = 30 litres

The cost of 30 litres shake = $11\frac{1}{10} \times 30 = \frac{111}{10} \times \frac{30}{1} = \frac{3330}{10} = ₹333$

Thus, the cost of 30 litres shake is ₹ 333.

7. The girls went to a circus = 50

The cost of 1 ticket = $15\frac{1}{2}$

The cost of 50 tickets = $15\frac{1}{2} \times 50 = \frac{31}{2} \times \frac{50}{1} = \frac{1550}{2} = ₹775$

Thus, the cost of 50 tickets is ₹ 775.

8. Each cement block weighs = $2\frac{1}{5}$ kg

The number of total block = 5

The weigh of 5 cement blocks $= 2\frac{1}{5} \times 5 = \frac{11}{5} \times \frac{5}{1} = \frac{55}{5} = 11$ kg

Thus, the weigh of 5 cement blocks is 11 kg.

9. A car travels at a speed = 80 km/h

The car reach Delhi from Mathura $= 3\frac{1}{2}$ hours

The distance between Delhi and Mathura

Distance = Speed × Time

$= 80 \times 3\frac{1}{2} = \frac{80}{1} \times \frac{7}{2} = \frac{560}{2} = 280$ km

Thus, the distance between Delhi and Mathura is 280 km.

10. A man earns in a month = ₹ 10,000

He spends on house rent $= \frac{1}{5}$ of $10{,}000 = \frac{1}{5} \times \frac{10000}{1} = \frac{10000}{5}$

$= 2000$

Thus, he spends on rent ₹ 2,000.

and, he spends on his personal expenses $= \frac{1}{2}$ of $10{,}000 = \frac{1}{2} \times \frac{10000}{1}$

$= \frac{10000}{2} =$ ₹ 5000

Thus, he spends on his personal expenses is ₹ 5,000.

Practice Coach – 6 !

1. (a) $4 \div \frac{1}{8} = \frac{4}{1} \times \frac{8}{1} = 32$ (b) $36 \div \frac{9}{13} = \frac{36}{1} \times \frac{13}{9} = \frac{468}{9} = 52$

(c) $12 \div \frac{6}{7} = \frac{12}{1} \times \frac{7}{6} = \frac{84}{6} = 14$ (d) $5 \div \frac{4}{9} = \frac{5}{1} \times \frac{9}{4} = \frac{45}{4} = 11\frac{1}{4}$

(e) $15 \div \frac{3}{10} = \frac{15}{1} \times \frac{10}{3} = \frac{150}{3} = 50$

(f) $\frac{15}{4} \div 10 = \frac{15}{4} \div \frac{10}{1} = \frac{15}{4} \times \frac{1}{10} = \frac{15}{40} = \frac{3}{8}$

(g) $\frac{2}{9} \div 6 = \frac{2}{9} \div \frac{6}{1} = \frac{2}{9} \times \frac{1}{6} = \frac{2}{54} = \frac{1}{27}$

(h) $\frac{15}{16} \div 20 = \frac{15}{16} \div \frac{20}{1} = \frac{15}{16} \times \frac{1}{20} = \frac{15}{320} = \frac{3}{64}$

(i) $\frac{7}{15} \div 14 = \frac{7}{15} \div \frac{14}{1} = \frac{7}{15} \times \frac{1}{14} = \frac{7}{210} = \frac{1}{30}$

(j) $\frac{8}{25} \div 20 = \frac{8}{25} \div \frac{20}{1} = \frac{8}{25} \times \frac{1}{20} = \frac{8}{500} = \frac{2}{125}$

(k) $\frac{2}{3} \div \frac{2}{5} = \frac{2}{3} \times \frac{5}{2} = \frac{10}{6} = \frac{5}{3}$ (l) $\frac{1}{8} \div \frac{3}{4} = \frac{1}{8} \times \frac{4}{3} = \frac{4}{24} = \frac{1}{6}$

(m) $\frac{1}{5} \div \frac{1}{7} = \frac{1}{5} \times \frac{7}{1} = \frac{7}{5}$ (n) $\frac{4}{7} \div \frac{3}{14} = \frac{4}{7} \times \frac{14}{3} = \frac{56}{21} = \frac{8}{3}$

(o) $\frac{16}{25} \div \frac{4}{5} = \frac{16}{25} \times \frac{5}{4} = \frac{80}{100} = \frac{4}{5}$

(p) $4\frac{2}{3} \div 5\frac{1}{3} = \frac{14}{3} \div \frac{16}{3} = \frac{14}{3} \times \frac{3}{16} = \frac{42}{48} = \frac{7}{8}$

(q) $5\frac{4}{9} \div 1\frac{2}{4} = \frac{49}{9} \div \frac{6}{4} = \frac{49}{9} \times \frac{4}{6} = \frac{196}{54} = \frac{98}{27}$

(r) $11\frac{4}{3} \div 15\frac{1}{7} = \frac{37}{3} \div \frac{106}{7} = \frac{37}{3} \times \frac{7}{106} = \frac{259}{318}$

(s) $12 \div 1\frac{1}{11} = \frac{12}{1} \div \frac{12}{11} = \frac{12}{1} \times \frac{11}{12} = \frac{132}{12} = 11$

(t) $5\frac{1}{3} \div \frac{8}{9} = \frac{16}{3} \div \frac{8}{9} = \frac{16}{3} \times \frac{9}{8} = \frac{144}{24} = 6$

2. The cost of $3\frac{1}{2}$ kg rice = ₹ 140

The cost of 1 kg rice = $140 \div 3\frac{1}{2} = \frac{140}{1} \div \frac{7}{2} = \frac{140}{1} \times \frac{2}{7} = \frac{280}{7} =$ ₹ 40

Thus, the cost of 1 kg rice is ₹ 40.

3. A man walks in $2\frac{1}{2}$ hours = $8\frac{1}{2}$ km

The distance will be cover in 1 hours = $8\frac{1}{2} \div 2\frac{1}{2} = \frac{17}{2} \div \frac{5}{2} = \frac{17}{2} \times \frac{2}{5}$

$= \frac{34}{10} = \frac{17}{5}$ km

Thus, a man walks $\frac{17}{5}$ km in 1 hours.

4. The number of children = 3

Total sweets = $\frac{24}{9}$

The sweets will each child get = $\frac{24}{9} \div 3 = \frac{24}{9} \div \frac{3}{1} = \frac{24}{9} \times \frac{1}{3}$

6. Sonu needs cloth to stich one shirt = $2\frac{1}{4}$ metres

The total cloth = $13\frac{1}{2}$ metres

The shirts can stich out of $13\frac{1}{2}$ metres cloth

$= 13\frac{1}{2} \div 2\frac{1}{4} = \frac{27}{2} \div \frac{9}{4} = \frac{27}{2} \times \frac{4}{9} = \frac{108}{18} = 6$ shirts

Thus, 6 shirts can stich out of $13\frac{1}{2}$ metres cloth.

7. The paint is used to paint a window = $\frac{1}{3}$rd of a can

The total cans = 6

The windows can be painted in 6 cans = $6 \div \frac{1}{3} = \frac{6}{1} \div \frac{1}{3} = \frac{6}{1} \times \frac{3}{1} = \frac{18}{1}$

= 18 widows

Thus, 18 windows can be painted with 6 cans.

Mental Maths

1. No **2.** No **3.** $\frac{15}{26}$ **4.** $\frac{1}{30}$ **5.** $\frac{1}{10}$ **6.** $\frac{5}{9}$ **7.** $\frac{8}{33}$ **8.** No **9.** 1 **10.** $\frac{9}{2}$

Multiple Choice Questions (MCQ) :

1. (c) $\frac{7}{18}$ **2.** (a) $2\frac{7}{12}$ **3.** (a) $\frac{9}{4}$ **4.** (b) $\frac{2}{3}$ **5.** (c) $\frac{1}{15}$

Chapter 5

Decimals

Practice Coach – 1 :

1. (a) 4.032 (b) 0.006 (c) 0.8 (d) 65.02 (e) 6.22 (f) 0.963

2. (a) Three hundred twenty five point two five
(b) Ninety point five six
(c) One point zero five four
(d) Zero point zero six seven
(e) Thirteen point seven six
(f) Thirty three point three two four
(g) Fifty six point nine zero eight
(h) Seventy eight point zero nine seven
(i) Ninety one point one one zero
(j) Thirty point zero two five

3. (a) $20 + 3 + \frac{7}{10}$ (b) $500 + 20 + 8 + \frac{1}{10} + \frac{3}{100}$ (c) $100 + 5 + 1 + \frac{1}{10} + \frac{5}{1000}$

(d) $300 + 20 + 5 + \frac{9}{10} + \frac{1}{100}$ (e) $100 + 8 + \frac{2}{10} + \frac{5}{100}$ (f) $400 + 20 + \frac{3}{100}$

(g) $500+9+\frac{9}{100}$ (h) $400+20+8+\frac{8}{10}+\frac{5}{100}$

4. (a) 428.8 (b) 787.32 (c) 1835.135 (d) 6.79 (e) 3002.094
(f) 18.091 (f) 205.753

Practice Coach – 2 !

1. (a) $2\frac{3}{10}=\frac{10\times2+3}{10}=\frac{23}{10}=2.3$ (b) $7\frac{1}{10}=\frac{10\times7+1}{10}=\frac{71}{10}=7.1$

(c) $10\frac{3}{100}=\frac{100\times10+3}{100}=\frac{1003}{100}=10.03$

(d) $42\frac{2}{100}=\frac{100\times42+2}{100}=\frac{4202}{100}=42.02$

(e) $25\frac{1}{1000}=\frac{1000\times25+1}{1000}=\frac{25001}{1000}=25.01$

(f) $18\frac{5}{100}=\frac{100\times18+5}{100}=\frac{1805}{100}=18.05$

(g) $22\frac{13}{1000}=\frac{1000\times22+13}{1000}=\frac{22013}{1000}=22.013$

(h) $35\frac{7}{100}=\frac{100\times35+7}{100}=\frac{3507}{100}=35.07$

(i) $62\frac{1}{10}=\frac{10\times62+1}{10}=\frac{621}{10}=62.1$

(j) $8\frac{1}{20}=\frac{20\times8+1}{20}=\frac{161}{20}=8.05$

(k) $17\frac{4}{25}=\frac{25\times17+4}{25}=\frac{429}{25}=17.16$

(l) $25\frac{1}{25}=\frac{25\times25+1}{25}=\frac{626}{25}=24.04$

2. (a) $2.03=2+0.03=2+\frac{3}{100}=\frac{200}{100}+\frac{3}{100}=\frac{203}{100}=2\frac{3}{100}$

(b) $8.1=8+0.1=8+\frac{1}{10}=\frac{80}{10}+\frac{1}{10}=\frac{81}{10}=8\frac{1}{10}$

(c) $100.01=100+0.01=100+\frac{1}{100}=\frac{10000}{100}+\frac{1}{100}=\frac{10001}{100}=100\frac{1}{100}$

(d) $32.17=32+0.17=32+\frac{17}{10}=\frac{320}{10}+\frac{17}{10}=\frac{337}{10}=33\frac{7}{10}$

(e) $18.007=18+0.007=18+\frac{7}{1000}=\frac{18000}{1000}+\frac{7}{1000}=\frac{18007}{1000}=18\frac{7}{1000}$

(f) $65.65=65+0.65=65+\frac{65}{100}=\frac{6500}{100}+\frac{65}{100}=\frac{6565}{100}=65\frac{65}{100}$

(g) $31.013 = 31 + 0.013 = 31 + \frac{13}{1000} + \frac{31000}{1000} + \frac{13}{1000} = \frac{31013}{1000} = 3\frac{13}{1000}$

(h) $81.08 = 81 + 0.08 = 81 + \frac{8}{100} = \frac{8100}{100} + \frac{8}{100} = \frac{8108}{100} = 81\frac{8}{100}$

(i) $59.2 = 59 + 0.2 = 59 + \frac{2}{10} = \frac{590}{10} + \frac{2}{10} = \frac{592}{10} = 59\frac{2}{10}$

(j) $93.09 = 93 + 0.09 = 93 + \frac{9}{100} = \frac{9300}{100} + \frac{9}{100} = \frac{9309}{100} = 93\frac{9}{100}$

(k) $75.075 = 75 + \frac{75}{100} = \frac{7500}{100} + \frac{75}{100} = \frac{7575}{100} = 75\frac{75}{100}$

(l) $55.52 = 55 + 0.52 = 55 + \frac{52}{100} = \frac{5500}{100} + \frac{52}{100} = \frac{5552}{100} = 55\frac{52}{100}$

3. (a) (3.45, 141.01); (18.3, 39.9) (b) (12.15, 3.75); (144.632, 0.149)
(c) (8.43, 119.87); (16.009, 8.114) (d) (115.125, 5.689); (8.5, 195.8)

4. (a) 11.5, 11.738, 512.51 (b) 745.090, 39.118, 12.800
(c) 81.500, 394.260, 0.489 (d) 346.620, 439.100, 30.623

5. (a) 6.700 (b) 10.010 (c) 144.890

6. (a) 6.50, 6.500 (b) 11.8, 11.800 (c) 91.7, 91.70 (d) 51.40, 51.400

Practice Coach – 3 !

1. (a) < (b) > (c) < (d) < (e) < (f) < (g) < (h) = (i) > (j) >

2. (a) 2.36 < 2.47 < 2.56 (b) 7.413 < 7.42 < 7.423
(c) 13.3 < 13.321 < 13.335 (d) 6.163 < 6.316 < 6.631
(e) 37.5 < 37.61 < 42.9 < 45.6 (f) 120.79 < 120.8 < 121.29 < 121.3

3. (a) 1.96 > 1.94 > 1.9 (b) 6.62 > 6.311 > 6.161
(c) 3.853 > 3.833 > 3.814 (d) 5.053 > 5.051 > 5.05
(e) 17.21 > 14.35 > 13.45 > 12.71 (f) 81.32 > 81.3 > 81.23 > 81.03

4. (a) 7.083 < **7.83** (b) 0.34 < **3.94** (c) **4.453** > 4.532
(d) 6.72 < **6.73** (e) 0.9 < **4.12** (f) **1** > 0.99 (g) **1.78** > 1.60

5. Dolly covered distance = 3.8 m
Rajat covered distance = 3.81 m
Vivek covered distance = 3.18 m
Arrange them = 3.81 m > 3.8 m > 3.18 m
Rajat Dolly Vivek
So, Rajat is first, Dolly is second and Vivek is third in long jump during sports day.

6. The height of Teenu = 90.28 cm
The height of Meenu = 91.82 cm
The heigth of Sheenu = 90.82 cm
The height of Cheenu = 92.18 cm

Arrange them in increasing order

= 90.28 cm < 90.82 cm < 91.82 cm < 92.18 cm

Practice Coach – 4 !

1. (a)
$$\begin{array}{r} 3.45 \\ 4.2 \\ +\ 7.34 \\ \hline 14.99 \end{array}$$

(b)
$$\begin{array}{r} 19.059 \\ 2.812 \\ +\ 3.764 \\ \hline 25.635 \end{array}$$

(c)
$$\begin{array}{r} 216.87 \\ 39.09 \\ 8.8 \\ +\ 17.6 \\ \hline 282.36 \end{array}$$

(d)
$$\begin{array}{r} 9.008 \\ 18.678 \\ 403.960 \\ +\ 38.800 \\ \hline 470.446 \end{array}$$

(e)
$$\begin{array}{r} 2.114 \\ 0.598 \\ +1.208 \\ \hline 3.920 \end{array}$$

(f)
$$\begin{array}{r} 3.125 \\ 7.431 \\ +17.008 \\ \hline 27.564 \end{array}$$

(g)
$$\begin{array}{r} 42.75 \\ 56.03 \\ 23.05 \\ \hline 121.83 \end{array}$$

(h)
$$\begin{array}{r} 56.021 \\ 3.020 \\ +4.060 \\ \hline 63.101 \end{array}$$

(i)
$$\begin{array}{r} 48.712 \\ 44.120 \\ +49.423 \\ \hline 142.255 \end{array}$$

(j)
$$\begin{array}{r} 4.321 \\ 7.923 \\ 18.125 \\ +723.981 \\ \hline 754.350 \end{array}$$

2. (a)
$$\begin{array}{r} 32.100 \\ -17.437 \\ \hline 14.663 \end{array}$$

(b)
$$\begin{array}{r} 607.40 \\ -25.48 \\ \hline 581.92 \end{array}$$

(c)
$$\begin{array}{r} 327.00 \\ -108.32 \\ \hline 218.68 \end{array}$$

(d)
$$\begin{array}{r} 5.400 \\ -1.003 \\ \hline 4.397 \end{array}$$

(e)
$$\begin{array}{r} 25.168 \\ -24.953 \\ \hline 00.215 \end{array}$$

(f)
$$\begin{array}{r} 42.445 \\ -39.783 \\ \hline 02.662 \end{array}$$

(g)
$$\begin{array}{r} 75.325 \\ -70.987 \\ \hline 4.338 \end{array}$$

(h)
$$\begin{array}{r} 173.820 \\ -149.596 \\ \hline 24.224 \end{array}$$

(i)
$$\begin{array}{r} 145.146 \\ -129.982 \\ \hline 15.164 \end{array}$$

(j)
$$\begin{array}{r} 927.00 \\ -432.81 \\ \hline 494.19 \end{array}$$

3. The sum of 127.78 and 38.57 =
$$\begin{array}{r} 127.78 \\ +\ 38.57 \\ \hline 166.35 \end{array}$$

Subtract 57.932 from 166.35 =
$$\begin{array}{r} 166.350 \\ -\ 57.932 \\ \hline 108.418 \end{array}$$

4. The sum of 18.2 and 30.17 =
$$\begin{array}{r} 18.20 \\ +\ 30.17 \\ \hline 48.37 \end{array}$$

Subtract 48.37 from 78.12 = 78.12

$$\begin{array}{r} -\ 48.37 \\ \hline 29.75 \end{array}$$

5. The sum of 92.37 and 121.92 = $\begin{array}{r} 92.37 \\ +\ 121.92 \\ \hline 214.29 \end{array}$

The sum of 235.2 and 87.19 = $\begin{array}{r} 87.19 \\ +\ 235.20 \\ \hline 322.39 \end{array}$

Subtract 214.29 from 322.39 = $\begin{array}{r} 322.39 \\ -\ 214.29 \\ \hline 108.10 \end{array}$

6. The difference of 65.23 and 38.97 = $\begin{array}{r} 65.23 \\ -\ 38.97 \\ \hline 26.26 \end{array}$

26.26 add to 321.49 = $\begin{array}{r} 321.49 \\ +\ 26.26 \\ \hline 347.75 \end{array}$

7. Surbhi purchased a book = ₹ 25.50
She purchased a pen = ₹ 15
She purchased a notepad = ₹ 45.25
The money was spent by Surbhi = $\begin{array}{r} ₹\ 25.50 \\ ₹\ 15.00 \\ +\ ₹\ 45.25 \\ \hline ₹\ 85.75 \end{array}$

Thus, Surbhi spent ₹ 85.75.

8. The number is 120 more than 45.32 = $\begin{array}{r} 120.00 \\ +\ 45.32 \\ \hline 165.32 \end{array}$

Thus, 165.32 is 120 more than 45.32.

9. A water tanker can carry water = 10,000 litres
It gives water to building A = 4325.75 litres
It gives water to building B = 3275.35 litres
The water leaks out on the road = 325.8 litres
The water will beleft in the tanker = ?
The total water out from the tanker = 4325.75 + 3275.35 + 325.8

$$\begin{array}{r} 4325.75 \\ 3275.35 \\ +\ 325.80 \\ \hline 7926.90 \end{array}$$

The water will be left in the tanker = 10,000 – 7926.90 litre
= 2073.10 litres

$$\begin{array}{r} 10000.00 \\ -\ 7926.90 \\ \hline 2073.10 \end{array}$$

Thus, 2073.10 litres water will be left in the tanker.

10. The distance from A to B = 13.78 km
The distance from B to C = 28.31 km
The distance from A to C = 35.91 km

(a) A person goes from village A to B and then from B to C and C to A = The total distance travelled by him
= A to B + B to C + C to A
= 13.78 km + 28.31 km + 35.91 km
= 78 km

$$\begin{array}{r} 13.79 \\ 28.31 \\ +\ 35.91 \\ \hline 78.00 \end{array}$$

Thus, the total distance travelled by him is 18 km.

(b) The distance from A to C = 35.91 km
The distance from A to B and B to C = 13.78 km + 28.31 km
= 42.09 km
Thus, he will travel less by going from A to C.

11. A fruit vender bought apples = 30 kg
He added apples = 12.8 kg
So, he has total apples = 30 kg + 12.8 kg = 42.8 kg
He sold apples = 40.75 kg
Then, the apples is left with him = 42.8 kg – 40.75 kg = 2.05 kg
Thus, 2.05 kg apples is left with him.

Practice Coach – 5 !

1. (a) 10×0.691 (The multiplier 10 has 1 zero)
= 6.91 (Move the decimal point 1 place to the right)

(b) 100×0.007 (The multiplier 100 has 2 zeros)
= 0.7 (Move the decimal point 2 places to the right)

(c) 1000×3.628 (The multiplier 1000 has 3 zeros)
= 3628 (Move the decimal point 3 places to the right)

(d) 10×1.003 (The multiplier 10 has 1 zero)
$= 10.03$ (Move the decimal point 1 place to the right)

(e) 100×0.83 (The multiplier 100 has 2 zeros)
$= 83$ (Move the decimal point 2 places to the right)

(f) 1000×9.65 (The multiplier 1000 has 3 zeros)
$= 9650$ (Move the decimal point 3 places to the right)

(g) 10×0.5 (The multiplier 10 has 1 zero)
$= 5$ (Move the decimal point 1 place to the right)

(h) 1000×4.8 (The multiplier 1000 has 3 zeros)
$= 4800$ (Move the decimal point 3 places to the right)

(i) 1.81×10 (The multiplier 10 has 1 zero)
$= 18.1$ (Move the decimal point 1 place to the right)

(j) 23.72×10 (The multiplier 10 has 1 zero)
$= 237.2$ (Move the decimal point 1 place to the right)

(k) 731.1×100 (The multiplier 100 has 2 zeros)
$= 73110$ (Move the decimal point 2 places to the right)

(l) 48.92×100 (The multiplier 100 has 2 zeros)
$= 4892$ (Move the decimal point 2 places to the right)

(m) 52.9×1000 (The multiplier 1000 has 3 zeros)
$= 52900$ (Move the decimal point 3 places to the right)

(n) 121.237×100 (The multiplier 100 has 2 zeros)
$= 12123.7$ (Move the decimal point 3 places to the right)

(o) 35.3×100 (The multiplier 100 has 2 zeros)
$= 3530$ (Move the decimal point 2 places to the right)

(p) 92.92×10 (The multiplier 10 has 1 zero)
$= 929.2$ (Move the decimal point 1 place to the right)

2. (a) 600×0.7

$$\begin{array}{r} 600 \\ \times\ 0.7 \\ \hline 420.0 \end{array}$$

(b) 70×0.3

$$\begin{array}{r} 70 \\ \times\ 0.3 \\ \hline 21.0 \end{array}$$

(c) 627×0.9

$$\begin{array}{r} 627 \\ \times\ 0.9 \\ \hline 564.3 \end{array}$$

(d) 0.534×5

$$\begin{array}{r} 0.534 \\ \times\ 5 \\ \hline 2.670 \end{array}$$

(e) 4.173×7.2

$$\begin{array}{r} 4.173 \\ \times\ 7.2 \\ \hline 8346 \\ +292110 \\ \hline 30.0456 \end{array}$$

(f) 7.981×0.56

$$\begin{array}{r} 7.981 \\ \times\ 0.56 \\ \hline 47886 \\ +399050 \\ \hline 4.46936 \end{array}$$

(g) 5.052×1.93

$$\begin{array}{r} 5.052 \\ \times\ 1.93 \\ \hline 15156 \\ 454680 \\ +505200 \\ \hline 9.75036 \end{array}$$

(h) 2.73×0.12

$$\begin{array}{r} 2.73 \\ \times 0.12 \\ \hline 546 \\ +\ 2730 \\ \hline 0.3276 \end{array}$$

(i) 9.8×2.63

$$\begin{array}{r} 9.8 \\ \times 2.63 \\ \hline 294 \\ 5880 \\ +19600 \\ \hline 25.774 \end{array}$$

(j) 7.891×12

$$\begin{array}{r} 7.891 \\ \times 12 \\ \hline 15782 \\ +78910 \\ \hline 94692 \end{array}$$

(k) 42.12×16

$$\begin{array}{r} 42.12 \\ \times 16 \\ \hline 25272 \\ +42120 \\ \hline 673.92 \end{array}$$

(l) 81.213×8

$$\begin{array}{r} 81.213 \\ \times 8 \\ \hline 649.704 \end{array}$$

(m) 218.3×9

$$\begin{array}{r} 218.3 \\ \times 9 \\ \hline 1964.7 \end{array}$$

(n) 3.51×7.9

$$\begin{array}{r} 3.51 \\ \times 7.9 \\ \hline 3159 \\ +24570 \\ \hline 27.729 \end{array}$$

(o) 5.3×6.2

$$\begin{array}{r} 5.3 \\ \times 6.2 \\ \hline 106 \\ +3180 \\ \hline 32.86 \end{array}$$

(p) 12.28×14.7

$$\begin{array}{r} 12.28 \\ \times 14.7 \\ \hline 8596 \\ 49120 \\ +122800 \\ \hline 180.516 \end{array}$$

(q) 15.21×1.37

$$\begin{array}{r} 15.21 \\ \times 1.37 \\ \hline 10647 \\ 45630 \\ +152100 \\ \hline 20.8377 \end{array}$$

(r) 53.6×21.4

$$\begin{array}{r} 53.6 \\ \times 21.4 \\ \hline 2144 \\ 5360 \\ +107200 \\ \hline 1147.04 \end{array}$$

(s) 13.23×5.27

$$\begin{array}{r} 13.23 \\ \times 5.27 \\ \hline 9261 \\ 26460 \\ +661500 \\ \hline 69.7221 \end{array}$$

(t)

$$\begin{array}{r} 6.25 \\ \times 5.5 \\ \hline 3125 \\ +31250 \\ \hline 34.375 \end{array}$$

3. Mr. Rajeev can run in one hour = 3.37 km

He run in 12 hour = $3.37 \times 12 = 40.44$ km

$$\begin{array}{r} 3.37 \\ \times\ 12 \\ \hline 674 \\ 3370 \\ \hline 40.44 \end{array}$$

Thus, Mr. Rajeev can run 40.44 km in 12 hours.

4. The price of 1 kg rice = ₹ 50.75

The price of 2.5 kg rice = 50.75×2.5

= ₹ 126.875

Thus, the price of 2.5 kg rice is ₹ 126.875.

5. The cloth is required to make a small tent = 15.25 metres

The cloth is needed to make 10 such tents = 15.25×10

= 152.5 metres

$$\begin{array}{r} 15.25 \\ \times\ 10 \\ \hline 0000 \\ +15250 \\ \hline 152.50 \end{array}$$

Thus, 152.5 metres cloth is needed to make 10 such tents.

Practice Coach – 6 !

1. (a) $279.8 \div 10$

$$\begin{array}{r|l} 10 & 279.8 \\ -20\downarrow & \\ \hline 79 & \\ -70 & \\ \hline 98 & \\ -90 & \\ \hline 80 & \\ -80 & \\ \hline 0 & \end{array} \quad 27.98$$

(b) $96.3 \div 100$

$$\begin{array}{r|l} 100 & 96.3 \\ -90\ 0 & \\ \hline 6\ 30 & \\ -6\ 00 & \\ \hline 300 & \\ -300 & \\ \hline 0 & \end{array} \quad 0.963$$

(c) $5.9 \div 1000$

$$\begin{array}{r|l} 1000 & 5.9 \\ -5\ 000 & \\ \hline 9000 & \\ -9000 & \\ \hline 0 & \end{array} \quad 0.0059$$

(d) $0.5 \div 10$

$$\begin{array}{r} 10\overline{)\ 0.50}(0.05 \\ -50 \\ \hline 0 \end{array}$$

(e) $2596 \div 1000$

$$\begin{array}{r} 1000\overline{)\ 2596}(2.596 \\ -2000 \\ \hline 5960 \\ -5000 \\ \hline 9600 \\ -9000 \\ \hline 6000 \\ -6000 \\ \hline 0 \end{array}$$

(f) $1317 \div 10$

$$\begin{array}{r} 10\overline{)\ 1317}(131.7 \\ -10 \\ \hline 31 \\ -30 \\ \hline 17 \\ -10 \\ \hline 70 \\ -70 \\ \hline 0 \end{array}$$

(g) $82.9 \div 10$

$$\begin{array}{r} 10\overline{)\ 82.9\ }(8.29 \\ -80 \\ \hline 29 \\ -20 \\ \hline 90 \\ -90 \\ \hline 0 \end{array}$$

(h) $121.7 \div 100$

$$\begin{array}{r} 100\overline{)\ 121.7}(1.217 \\ -100 \\ \hline 217 \\ -200 \\ \hline 170 \\ -100 \\ \hline 700 \\ -700 \\ \hline 0 \end{array}$$

(i) $328.71 \div 100$

$$\begin{array}{r} 100\overline{)\ 328.71}(3.2871 \\ -300 \\ \hline 287 \\ -200 \\ \hline 871 \\ -800 \\ \hline 710 \\ -700 \\ \hline 100 \\ -100 \\ \hline 0 \end{array}$$

(j) $46.24 \div 10$

$$\begin{array}{r} 10\overline{)\ 46.24}(4.624 \\ -40 \\ \hline 62 \\ -60 \\ \hline 24 \\ -20 \\ \hline 40 \\ -40 \\ \hline 0 \end{array}$$

(k) $0.35 \div 1000$

$$\begin{array}{r} 1000\overline{)\ 0.3500}(0.00035 \\ -3000 \\ \hline 5000 \\ -5000 \\ \hline 0 \end{array}$$

(l) $1.96 \div 100$

$$\begin{array}{r} 100\overline{)\ 1.96}(0.196 \\ -1\ 00 \\ \hline 960 \\ -900 \\ \hline 600 \\ -600 \\ \hline 0 \end{array}$$

2. (a) $0.744 \div 6$

$$\begin{array}{r} 6\overline{)\ 0.744}(0.124 \\ -0.6 \\ \hline 14 \\ -12 \\ \hline 24 \\ -24 \\ \hline 0 \end{array}$$

(b) $0.75 \div 5$

$$\begin{array}{r} 5\overline{)\ 0.75}(0.15 \\ -0.5\downarrow \\ \hline 25 \\ -25 \\ \hline 0 \end{array}$$

(c) $21.364 \div 7$

$$\begin{array}{r} 7\overline{)\ 21.364}(3.052 \\ -21 \\ \hline 36 \\ -35 \\ \hline 14 \\ -14 \\ \hline 0 \end{array}$$

(d) $2.745 \div 9$

$$
\begin{array}{r|l}
9 & 2.745 \\
-27 & 0.305 \\
\hline
45 & \\
-45 & \\
\hline
0 &
\end{array}
$$

(e) $101.52 \div 28$

$$
\begin{array}{r|l}
28 & 101.52 \\
-84 & 3.625 \\
\hline
175 & \\
-168 & \\
\hline
72 & \\
-56 & \\
\hline
160 & \\
-140 & \\
\hline
20 &
\end{array}
$$

(f) $694.2 \div 15$

$$
\begin{array}{r|l}
15 & 694.2 \\
-60 & 46.28 \\
\hline
94 & \\
-90 & \\
\hline
42 & \\
-30 & \\
\hline
120 & \\
-120 & \\
\hline
0 &
\end{array}
$$

(g) $735.42 \div 12$

$$
\begin{array}{r|l}
12 & 735.42 \\
-72 & 61.285 \\
\hline
15 & \\
-12 & \\
\hline
34 & \\
-24 & \\
\hline
102 & \\
-96 & \\
\hline
60 & \\
-60 & \\
\hline
0 &
\end{array}
$$

(h) $896.36 \div 16$

$$
\begin{array}{r|l}
16 & 896.36 \\
-80 & 56.0225 \\
\hline
96 & \\
-96 & \\
\hline
036 & \\
-32 & \\
\hline
40 & \\
-32 & \\
\hline
80 & \\
-80 & \\
\hline
0 &
\end{array}
$$

(i) $136.62 \div 15$

$$
\begin{array}{r|l}
15 & 136.62 \\
-135 & 9.108 \\
\hline
16 & \\
-15 & \\
\hline
120 & \\
-120 & \\
\hline
0 &
\end{array}
$$

(j) $0.4127 \div 3.3 = \dfrac{0.4127}{3.3}$

Now, move the decimal point by 1 place to the right $= \dfrac{4.127}{33}$ (Divide by 33)

$$
\begin{array}{r|l}
33 & 4.127 \\
-33 & 0.125 \\
\hline
82 & \\
-66 & \\
\hline
167 & \\
-165 & \\
\hline
2 &
\end{array}
$$

(k) $781.7 \div 0.24 = \dfrac{781.7}{0.24}$

Now, move the decimal point by 2 place to the right $= \dfrac{78170}{24}$

$$
\begin{array}{r|l}
24 & 78170 \\
-72 & 3257.083 \\
\hline
61 & \\
-48 & \\
\hline
137 & \\
-120 & \\
\hline
170 & \\
-168 & \\
\hline
200 & \\
-192 & \\
\hline
80 & \\
-72 & \\
\hline
8 &
\end{array}
$$

(l) $213.8 \div 8.2 = \frac{213.8}{8.2}$

Now move the decimal point by 1 place to the right $= \frac{2138}{82}$

$$
\begin{array}{r}
26.073 \\
82\overline{)\,2138} \\
-\,164 \\
\hline
498 \\
-\,492 \\
\hline
600 \\
-\,574 \\
\hline
260 \\
-\,246 \\
\hline
14
\end{array}
$$

(m) $540.5 \div 0.25 = \frac{540.5}{0.25}$

Now, move the decimal point by 2 places to the right $= \frac{54050}{25}$

$$
\begin{array}{r}
2162 \\
25\overline{)\,54050} \\
-\,50 \\
\hline
40 \\
-\,25 \\
\hline
155 \\
-\,150 \\
\hline
50 \\
-\,50 \\
\hline
0
\end{array}
$$

(n) $490.32 \div 3.2 = \frac{490.32}{3.2}$

Now, move the decimal point by 1 place to the right $= \frac{4903.2}{32}$

$$
\begin{array}{r}
153.225 \\
25\overline{)\,4903.2} \\
-\,32 \\
\hline
170 \\
-\,160 \\
\hline
103 \\
-\,96 \\
\hline
72 \\
-\,64 \\
\hline
80 \\
-\,64 \\
\hline
160 \\
-\,160 \\
\hline
0
\end{array}
$$

3. The weight of total rice = 110.25 kg
The number of total children = 100
The rice would each child get
= 110.25 kg ÷ 100

Thus, 1.1025 kg rice would each child get.

$$
\begin{array}{r}
1.1025 \\
100\overline{)\,110.25} \\
-\,100 \\
\hline
102 \\
-\,100 \\
\hline
250 \\
-\,200 \\
\hline
500 \\
-\,500 \\
\hline
0
\end{array}
$$

4. Akash bought milk = 54.75 litres
In 64.75 litres milk made desert = 18.5 kg
The milk is need for 1 kg of desert = 64.75 ÷ 18.5

$$= \frac{64.75}{18.5}$$

$$185\overline{)\ 647.5}(3.5$$
$$-555$$
$$925$$
$$-925$$
$$0$$

Now, move the decimal point by 1 place to the right $= \frac{647.5}{185}$

= 3.5 litres

Thus, 3.5 litres milk is need for 1 kg of desert.

5. The total length of ribbon = 781.25 m
Mrs. Arora cuts the pieces from the ribbon = 16
The length of each piece = 781.28 ÷ 16
= 48.83 m

$$16\overline{)\ 781.28}(48.83$$
$$-64$$
$$141$$
$$-128$$
$$132$$
$$-128$$
$$48$$
$$-48$$
$$0$$

Thus, the length of each piece is 48.83 m.

Mental Maths

1. 3 **2.** 0.008 **3.** 27.501 **4.** $8 + \frac{5}{100} + \frac{6}{1000}$ **5.** No

6. 5.50 **7.** 4.444 **8.** 8463 **9.** 1250 **10.** True

Multiple Choice Questions (MCQ) :

1. (a) 6 **2.** (b) 0.03527 **3.** (b) 1.47 **4.** (a) 5.84 **5.** (c) 0.3

Chapter 6

Basic Geometry

Practice Coach – 1 !

1. (a) parallel (b) intersecting (c) intersecting (d) parallel
(e) interesting (f) parallel (g) perpendicular (h) perpendicular
(i) intersecting (j) intersecting **2.** (a) QR, RS, ST (b) AB, CD

3. (a) CA, BA (b) GH (c) DH (d) AB, BC, BD, DE, EF, DF, DH

4. (a) Parallel = AB || CD, AD || BC; Perpendicular = DA ⊥ AB,
AB ⊥ BC, BC ⊥ CD, CD ⊥ DA, (b) Parallel = AB || CD;
Perpendicular = AB ⊥ BD, CD ⊥ BD **5.** Do yourself

Practice Coach – 2 !

1. (a) 60° (b) 90° (c) 105° (d) 180° (e) 80° (f) 10° (g) 130°
(h) 45° (i) 30° (j) 145° (k) 25° (l) 95° **2.** Do yourself **3.** Do yourself

Practice Coach – 3 !

1. (a) acute (b) straight (c) right (d) complete (e) obtuse (f) acute
2. (a) 30°–acute angle (b) 20°–acute angle (c) 90°–right angle
(d) 135°–obtuse angle (e) 80°–acute angle (f) 160°–obtuse angle
3. (a) acute angle (b) obtuse angle (c) right angle

Practice Coach – 4 !

Do yourself

Mental Maths

1. Yes **2.** True **3.** parallel **4.** 180° **5.** No. **6.** Intersecting
7. Obtuse **8.** 180° **9.** 360° **10.** 45°

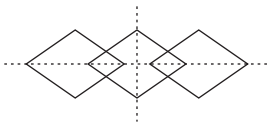
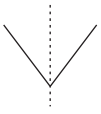
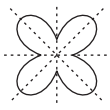
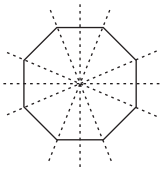
Multiple Choice Questions (MCQ) :

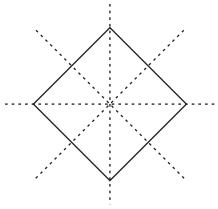
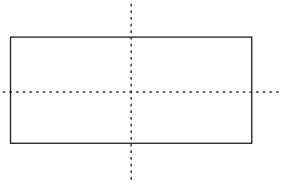
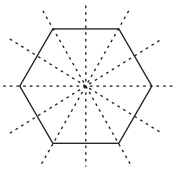
1. (b) 2 **2.** (a) degrees **3.** (a) protactor **4.** (a) vertex **5.** (b) line segment

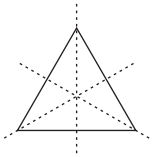
Chapter 7

Symmetry

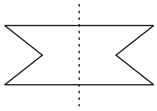
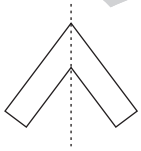
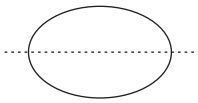
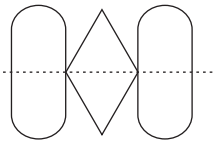
Practice Coach – 1 !

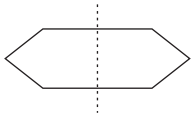
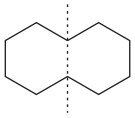
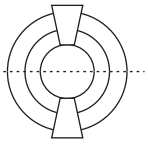
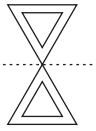
1. (a)  (b)  (c)  (d) 

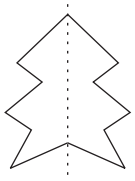
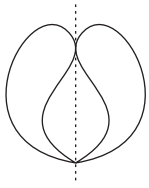
(e)  (f)  (g) 

(h) 

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

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

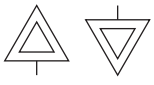
(e)  (f)  (g)  (h) 

(i)  (j) 

Practice Coach – 2 !

1. Do yourself **2.** 808,888 **3.** N, I, M, O, S, X **4.** Do yourself

Practice Coach – 3 !

1. (a)  (b)  (d) 

2. Do yourself

Chapter 8 Patterns

Practice Coach – 1 !

1. (a) 243, 729 (b) 55, 91 (c) 30, 35 (d) 35, 48
2. 351 **3.** 45 **4.** 225 **5.** (a) 49 (b) 256 **6.** Do yourself

Chapter 9 Metric Measures

Practice Coach – 1 !

1. Do yourself **2.** (a) 5000 (b) 0.4 (c) 40 (d) 1.15 (e) 40300
(f) 0.585 (g) 900 (h) 840 (i) 16 (j) 5 (k) 0.0734 (l) 4.79

3. (a) 247 mm into m

$1 \text{ m} = 1000 \text{ mm} \quad \Rightarrow \quad 247 \text{ m} = \frac{247}{1000} \text{ m} = 0.247 \text{ m}$

(b) 3042 l into kl

$1 \text{ kl} = 1000 \text{ l} \quad \Rightarrow \quad 3042 \text{ l} = \frac{3042}{1000} \text{ kl} = 3.042 \text{ kl}$

(c) 3532 cg into g

$1 \text{ g} = 100 \text{ cg} \quad \Rightarrow \quad 3532 \text{ cg} = \frac{3532}{100} \text{ g} = 35.32 \text{ g}$

(d) 416 dag into kg

$1 \text{ kg} = 100 \text{ dag} \quad \Rightarrow \quad 416 \text{ dag} = \frac{416}{100} \text{ kg} = 4.16 \text{ kg}$

(e) 121 cm into km

$1 \text{ km} = 100000 \text{ cm} \quad \Rightarrow \quad 121 \text{ cm} = \frac{121}{100{,}000} \text{ km} = 0.00121 \text{ km}$

(f) 1248 g into hg

$1 \text{ hg} = 100 \text{ g} \quad \Rightarrow \quad 1248 \text{ g} = \frac{1248}{100} \text{ kg} = 12.48 \text{ hg}$

4. (a) 48 km to dm

$1 \text{ km} = 100 \text{ dm} \quad \Rightarrow \quad 49 \text{ km} = 49 \times 100 \text{ dm} = 4900 \text{ dm}$

(b) 18.28 kg to g

$1 \text{ kg} = 1000 \text{ g} \quad \Rightarrow \quad 18.28 \text{ kg} = 18.28 \times 1000 \text{ g} = 18280 \text{ g}$

(c) 12 dg to mg

$1 \text{ dg} = 100 \text{ mg} \quad \Rightarrow \quad 12 \text{ dg} = 12 \times 100 \text{ mg} = 1200 \text{ mg}$

(d) 25 hm to mm

$1 \text{ hm} = 100000 \text{ mm} \quad \Rightarrow \quad 25 \text{ hm} = 25 \times 100000 = 2500000 \text{ mm}$

(e) 523 m to cm

$1\text{m} = 100 \text{ cm} \quad \Rightarrow \quad 523 \text{ m} = 523 \times 100 \text{ cm} = 52300 \text{ cm}$

(f) 34 dal to cl

$1 \text{ dal} = 1000 \text{ cl} \quad \Rightarrow \quad 34 \text{ dal} = 34 \times 1000 \text{ cl} = 34000 \text{ cl}$

Practice Coach – 2 !

1. (a)

m	dm	cm	mm
5	8	6	3
3	5	7	0
+ 2	6	4	3
12	0	7	6

(b)

km	hm	dam	m
3	4	3	2
5	9	7	3
+ 5	2	0	3
14	6	0	8

(c)

kg	hg	dag	g
3	5	6	2
− 1	2	5	4
2	3	0	8

(d)

g	dg	cg	mg
8	7	5	4
3	2	6	5
− 3	4	8	9

(e)

l	dl	cl	ml
8	6	6	8
− 2	5	5	5
6	1	1	3

(f)

g	dg	cg	mg
2	5	8	6
+ 1	3	4	1
3	9	2	7

2. (a)

km	hm	dam	m
7	5	6	3
1	2	5	8
+ 4	5	3	9
13	3	6	0

(b)

g	dg	cg	mg
8	6	5	0
3	5	5	0
+ 1	6	8	3
10	8	8	3

(c)

kl	hl	dal	l
3	6	5	8
4	5	2	1
+ 8	5	6	9
16	7	4	8

3. (a)

km	hm	dam	m
7	4	8	5
− 2	3	6	5
5	1	2	0

(b)

kg	hg	dag	g
8	5	3	9
− 4	6	4	1
3	8	9	8

(c)

kl	hl	dal	l
5	3	7	9
− 1	9	7	2
3	4	0	7

4. Shika bought potatoes = 4 kg 890 g
She bought tomatoes = 4 kg 230 g
She bought capsicum = 5 kg 760 g
The weight of the total vegetables

kg	g
4	890
4	230
+ 5	760
14	880

Thus, 14 kg 880 g is the total weight of the vegetables bought by her in kilograms.

5. A painter used black paint = 10 l 170 ml
He used red paint = 6 l 416 ml
He used white paint = 7 l 7 ml
The total quantity of paint

l	ml
10	170
6	416
+ 7	007
23	593

Thus, the total quantity of paint used by the painter is 23 l 593 ml.

6. A can containing milk = 10 litres

Mrs. Malik took milk in the morning = 3.8 litres

She took milk in the evening = 2.3 litres

The milk left in the can = 10 – (3.8 + 2.3) = 10 – 6.1 = 3.9 l

$$1 \text{ hl} = 100 \text{ l}$$

So, $$3.9 \text{ l} = \frac{3.9}{100} \text{ hl} = 0.039 \text{ hl}$$

Thus, 0.039 hectolitres of milk is left in the can.

7. A worm climbing up a high wall = 13 m

He slipped back = 3 m 35 cm

The worm had reached = 13 m – 3m 35 m cm = 9 m 65 cm

Thus, 9 m 65 cm far had the warm reched.

8. Ashutosh runs in one minute = 2.72 metres

Seema runs in one minute = 1.08 metres

Ashutosh cover more distance in one minute than Seema

m	cm
2	72
– 1	08
1	64

= 2.72 m – 1.08 m = 1.64 m

1 m = 100 cm

Then, 1 m 64 cm = 1 m + 64 cm = 1 × 100 + 64 = 164 cm

Thus, Aushtosh cover 164 cm more distance in one minute than Seema.

9. A container contains milk = 79.225 l

Second container contains milk = 85.236 l

The second container contain more milk because

85.236
– 79.225
6.011

79.225 l < 85.236 l

= 85.236 l – 79.225 l = 6.011 l

Thus, the second container contains 6.011 l more milk than first container.

Practice Coach – 4 !

1. (a) 500 g (b) 1 kg (c) 1 l (d) 12 cm (e) 250 ml (f) 2 m

Mental Maths

1. 200 m **2.** 0.3 **3.** 0.63 **4.** 4.372 **5.** 1.4 **6.** 4 **7.** 70 **8.** 0.025 **9.** 5 **10.** 500

Multiple Choice Questions (MCQ) :

1. (b) 90 **2.** (b) 6 **3.** 0.622 km **4.** (a) 0.846 **5.** (a) 37.5

Chapter

10

Area and Perimeter

Practice Coach – 1 !

1. (a) Perimeter of square = $4 \times s$
$= 4 \times 10 = 40$ cm

(b) Perimeter of rectangle = $2 \times (l + b)$
$= 2 \times (25 + 15) = 2 \times 40 = 80$ cm

(c) Perimeter of rectangle = $2 \times (l + b)$
$= 2 \times (10 + 15) = 2 \times 25 = 50$ cm

(d) Perimeter of square = $4 \times s$
$= 4 \times 18 = 72$ cm

(e) Perimeter of rectangle = $2 \times (l + b)$
$= 2 \times (7 + 19) = 2 \times 26 = 52$ cm

(f) Perimeter of rectangle = $2 \times (l + b)$
$= 2 \times (28 + 13) = 2 \times 41 = 82$ cm

2. (a) $l = 15$ cm, $b = 12$ m
Perimeter of rectangle = $2 \times (l + b)$
$= 2 \times (15 + 12) = 2 \times 27 = 54$ cm

(b) $l = 2.6$ m, $b = 1.3$ m
Perimeter of rectangle = $2 \times (l + b)$
$= 2 \times (2.6 + 1.3) = 2 \times 3.9$ m $= 7.8$ m

(c) $l = 54$ cm, $b = 40$ cm
Perimeter of rectangle = $2 \times (l + b)$
$= 2 \times (54 + 40) = 2 \times 94$ cm $= 188$ cm

(d) $l = 12$ m, $b = 9$ m
Perimeter of rectangle = $2 \times (l + b)$
$= 2 \times (12 + 9) = 2 \times 21$ m $= 42$ m

(e) $l = 5$ m, $b = 7$ m
Perimeter of rectangle = $2 \times (l + b)$
$= 2 \times (5 + 7) = 2 \times 12$ m $= 24$ m

(f) $l = 18.5$ m, $b = 16.5$ m
Perimeter of rectangle = $2 \times (l + b)$
$= 2 \times (18.5 + 16.5) = 2 \times 35$ m $= 70$ m

3. (a) Side = 12 cm

Perimeter of square = $4 \times s$

$= 4 \times 12 = 48$ cm

(b) Side = 6 cm

Perimeter of square = $4 \times s$

$= 4 \times 6 = 24$ cm

(c) Side = 9.8 cm

Perimeter of square = $4 \times s$

$= 4 \times 9.8 = 39.2$ cm

(d) Side = 25 cm

Perimeter of square = $4 \times s$

$= 4 \times 25 = 100$ cm

(e) Side = 9 cm

Perimeter of square = $4 \times s$

$= 4 \times 9 = 36$ cm

(f) Side = 4.8 m

Perimeter of square = $4 \times s$

$= 4 \times 4.8 = 19.2$ m

4. (a) P = 40 cm

Perimeter of square = $4 \times s$

$40 \text{ cm} = 4 \times s \Rightarrow s = \frac{40}{4} \text{ cm} \Rightarrow s = 10 \text{ cm}$

(b) P = 4.8 m

Perimeter of square = $4 \times s$

$4.8 \text{ m} = 4 \times s \Rightarrow s = \frac{4.8}{4} \text{ m} \Rightarrow s = 1.2 \text{ m}$

(c) P = 120 cm

Perimeter of square = $4 \times s$

$120 \text{ cm} = 4 \times s \Rightarrow s = \frac{120}{4} \text{ cm} \Rightarrow s = 30 \text{ cm}$

(d) P = 28 cm

Perimeter of square = $4 \times s$

$28 \text{ cm} = 4 \times s \Rightarrow s = \frac{28}{4} \text{ cm} \Rightarrow s = 7 \text{ cm}$

(e) P = 23.6 cm

Perimeter of square = $4 \times s$

$23.6 \text{ cm} = 4 \times s \Rightarrow s = \frac{23.6}{4} \text{ cm} \Rightarrow s = 5.9 \text{ cm}$

(f) P = 64 cm

Perimeter of square = $4 \times s$

$64 \text{ cm} = 4 \times s \quad \Rightarrow \quad s = \frac{64}{4} \text{ cm} \quad \Rightarrow \quad s = 16 \text{ cm}$

5. The length of a carpet = 3.4 m

The breadth of a carpet = 2.3 m

The perimeter of a carpet = $2 \times (l + b)$

$= 2 \times (3.4 \text{ m} + 2.3 \text{ m}) = 2 \times 5.7 \text{ m} = 11.4 \text{ m}$

Thus, the perimeter of a carpet is 11.4 m.

6. (a) Perimeter of a square = $4 \times s$

$= 4 \times 46.5 \text{ cm} = 186 \text{ cm}$

(b) Perimeter of a rectangle = $2 \times (l + b)$

$= 2 \times (18.5 \text{ , } + 22.5 \text{ m}) = 2 \times 41 \text{ m} = 82 \text{ m}$

Practice Coach – 2 !

1. (a) Area of rectangle = $l \times b$

$= 15 \text{ cm} \times 10 \text{ cm} = 150 \text{ cm}^2$

(b) Area of square = side × side

$= 2.8 \text{ cm} \times 2.8 \text{ cm} = 7.84 \text{ cm}^2$

(c) Area of square = side × side

$= 3.5 \text{ cm} \times 3.5 \text{ cm} = 12.25 \text{ cm}^2$

(d) Area of rectangle = $l \times b$

$= 2 \text{ cm} \times 5 \text{ cm} = 10 \text{ cm}^2$

(e) Area of square = side × side

$= 4 \text{ cm} \times 4 \text{ cm} = 16 \text{ cm}^2$

2. (a) l = 5.8 m, b = 3.2 m

Area of rectangle = $l \times b$

$= 5.8 \text{ m} \times 2.8 \text{ m} = 16.24 \text{ m}^2$

(b) side = 5.5 units

Area of square = side × side

$= 5.5 \text{ units} \times 5.5 \text{ units} = 30.25 \text{ units}^2$

(c) l = 3.1 cm, b = 2.8 cm

Area of rectangle = $l \times b$

$= 3.1 \text{ cm} \times 2.8 \text{ cm} = 8.68 \text{ cm}^2$

(d) l = 12.1 cm, b = 8.2 cm

Area of rectangle = $l \times b$

$= 12.1 \text{ cm} \times 8.2 \text{ cm} = 99.22 \text{ cm}^2$

(e) side = 8 m

Area of square = side × side

= 8 m × 8 m = 64 m

(f) side = 76.5 cm

Area of square = side × side

= 76.5 cm × 76.5 cm = 5852.25 cm

3.

Length (cm)	7	6	5	**5**	6	15	12	**7**	7	**15**
Breadth (cm)	8	**7**	3	**7**	4	**9**	13	14	9	8
Area of rectangle (sq.cm)	**56**	42	15	35	**24**	135	**156**	98	**63**	120

4. The length of a rectangular bed = 56 m

The breadth of a rectangular bed = 29 m

The area of a rectangular bed = l × b

= 56 m × 29 m = 1624 m

Thus, the area of a rectangular bed is 1624 m.

5. A table top is covered = 12 squares of equal size

Side of the square = 5

The area of square = side × side

= 5 cm × 5 cm = 25 cm^2

The area of table top = 25 cm × 12 cm = 300 cm^2

Thus, the area of a table top is 300 cm^2.

6. The length of a carpet = 12 m

The breadth of a carpet = 7 cm

Area of the carpet = l × b

= 12 m × 7 m = 84 m

Thus, the area of the rectangular carpet is 84 m.

7. The length of the room = 25 units

The breadth of the room = 18 units

The square tiles of side/1 unit will be needed = 25 units × 18 units

= 450 sq. units

8. (a) 36 sq. cm

Area of square = side × side

$36 = side^2 \Rightarrow side = \sqrt{36} \Rightarrow side = \sqrt{6 \times 6} = 6$ cm

(b) 144 sq. cm

Area of square = side × side

$144 = side^2 \Rightarrow side = \sqrt{144} \Rightarrow side = \sqrt{12 \times 12} = 12$ cm

(c) 64 sq. cm

Area of square = side × side

$64 = side^2 \Rightarrow side = \sqrt{64} \Rightarrow side = \sqrt{8 \times 8} = 8$ cm

(d) 225 sq. cm

Area of square = side × side

$225 = \text{side}^2 \Rightarrow \text{side} = \sqrt{225} \Rightarrow \text{side} = \sqrt{15 \times 15} = 15$ cm

Practice Coach – 3 !

1. (a) Area of traingle = $\frac{1}{2}$ × area of rectangle

Area of rectangle = $3 \times 4 = 12$ sq. units

$\therefore$ Area of triangle = $\frac{12}{2}$ sq. units = 6 sq. units

(b) Area of triangle = $\frac{1}{2}$ × area of rectangle

Area of rectangle = $5 \times 3 = 15$ sq. units

$\therefore$ Area of triangle = $\frac{15}{2}$ sq. units = 7.5 sq. units

(c) Area of triangle = $\frac{1}{2}$ × area of rectangle

Area of rectangle = $2 \times 3 = 6$ sq. units

$\therefore$ Area of triangle = $\frac{6}{2}$ sq. units = 3 sq. units

(d) Area of traingle = $\frac{1}{2}$ × area of rectangle

Area of rectangle = $4 \times 3 = 12$ sq. units

$\therefore$ Area of triangle = $\frac{12}{2}$ sq. units = 6 sq. units

(e) Area of traingle = $\frac{1}{2}$ × area of rectangle

Area of rectangle = $2 \times 7 = 14$ sq. units

$\therefore$ Area of triangle = $\frac{14}{2}$ sq. units = 7 sq. units

(f) Area of traingle = $\frac{1}{2}$ × area of rectangle

Area of rectangle = $6 \times 5 = 30$ sq. units

$\therefore$ Area of triangle = $\frac{30}{2}$ sq. units = 15 sq. units

(g) Area of traingle = $\frac{1}{2}$ × area of rectangle

Area of rectangle = $3 \times 5 = 15$ sq. units

$\therefore$ Area of triangle = $\frac{15}{2}$ sq. units = 7.5 sq. units

(h) Area of traingle = $\frac{1}{2}$ × area of rectangle

Area of rectangle = $6 \times 3 = 18$ sq. units

$\therefore$ Area of triangle = $\frac{18}{2}$ sq. units = 9 sq. units

Practice Coach – 4 !

Do yourself

Mental Maths

1. perimeter **2.** XY, YZ, XZ **3.** 4 × side **4.** 2 × (l + b) **5.** l × b

6. side × side **7.** 2.96 m **8.** side **9.** 5 **10.** 2

Multiple Choice Questions (MCQ) :

1. (a) 10 m **2.** (b) 8 sq. cm **3.** (c) 81 sq. m **4.** 15 sq. cm

Chapter 11

Volume and Nets

Practice Coach – 1 !

1. (a) l = 4 cm, b = 2 cm, h = 3 cm, v = 24 cm^3

(b) l = 2 cm, b = 2 cm, h = 5 cm, v = 20 cm^3

(c) l = 2 cm, b = 2 cm, h = 2 cm, v = 8 cm^3

(d) l = 3 cm, b = 1 cm, h = 2 cm, v = 4 cm^3

(e) l = 5 cm, b = 1 cm, h = 5 cm, v = 25 cm^3

(f) l = 6 cm, b = 1 cm, h = 2 cm, v = 12 cm^3

2. (a) 5 cm^3 (b) 15 cm^3 (c) 7 cm^3

(d) 24 cm^3 (e) 16 cm^3 (f) 19 cm^3

Practice Coach – 2 !

1. (a) Volume = length × breadth × height

V = 15 m × 3 m × 4 m

= 180 m^3

(b) V = l × b × h

= 20 cm × 20 cm × 20 cm

= 8000 cm^3

(c) $V = l \times b \times h$

$= 40 \text{ cm} \times 10 \text{ cm} \times 15$

$= 6000 \text{ cm}^3$

(d) $V = l \times b \times h$

$= 6 \text{ m} \times 5 \text{ m} \times 12 \text{ m}$

$= 360 \text{ m}^3$

(e) $V = l \times b \times h$

$= 8 \text{ cm} \times 8 \text{ cm} \times 8 \text{ cm}$

$= 512 \text{ cm}^3$

(f) $V = l \times b \times h$

$= 16 \text{ cm} \times 8 \text{ cm} \times 13 \text{ cm}$

$= 1664 \text{ cm}^3$

(g) $V = l \times b \times h$

$= 50 \text{ m} \times 35 \text{ m} \times 20 \text{ m}$

$= 35000 \text{ m}^3$

2. (a) 120 m3 (b) 216 m^3 (c) 1 cm (d) 4 m

3. A water tank measures = 6 m, 5 m, 2 m

Volume $= l \times b \times h$

$= 6 \text{ m} \times 5 \text{ m} \times 2 \text{ m}$

$= 60 \text{ m}^3$

Thus, 60 m^3 is the volume of the water that can be stored in it.

4. A box has equal length, breadth and height = 35 cm each

The volume $= l \times b \times h$

$= 35 \text{ m} \times 35 \text{ m} \times 35 \text{ m}$

$= 42875 \text{ m}^3$

Thus, the volume of a box is 42875 m^3.

5. 10 m

6. Length and breadth of a big hall = 50 m

The height of big hall = 14 m

The volume of the big hall $= l \times b \times h$

$= 50 \text{ m} \times 14$

$= 700 \text{ m}^3$

Thus, the volume of a big hall is 700 m^3.

Chapter

12

Time and Temperature

Practice Coach – 1 !

1. (a) We know that,

1 day = 24 hours

5 days = 5 × 24 hours

= 120 hours

(b) We know that

1 day = 24 hours

9 days = 9 × 24 hours

= 216 hours

(c) We know that,

1 day = 24 hours

15 days = 5 × 24 hours

= 360 hours

(d) We know that,

1 day = 24 hours

86 days = 86 × 24 hours

= 2064 hours

(e) We know that,

1 day = 24 hours

Therefore, 22 days 8 hours = 22 × 24 hours + 8 hours

= 528 hours + 8 hours

= 536 hours

(f) We know that,

1 day = 24 hours

Therefore, 18 days 6 hours = 18 × 24 hours + 6 hours

= 432 hours + 6 hours

= 438 hours

(g) We know that,

1 day = 24 hours

Therefore, 50 days 15 hours = 50 × 24 hours + 15 hours

= 1200 hours + 15 hours

= 1215 hours

(h) We know that,

1 day = 24 hours

Therefore, 80 days 11 hours = 80 × 24 hours

= 1920 hours + 11 hours

= 1931 hours

(i) We know that,

1 day = 24 hours

Therefore 79 days 8 hours = 79 × 24 hours + 8 hours

= 1896 hours + 8 hours

= 1904 hours

(j) We know that,

1 day = 24 hours

Therefore, 13 days 13 hours = 13 × 24 hours + 13 hours

= 312 hours + 13 hours

= 325 hours

(k) We know that,

1 day = 24 hours

Therefore, 80 days 5 hours = 80 × 24 hours + 5 hours

= 1920 hours + 5 hours

= 1925 hours

(l) We know that,

1 day = 24 hours

Therefore, 63 days 20 hours = 63 × 24 hours + 20 hours

= 1512 hours + 20 hours

= 1532 hours

2. (a) We know that,

1 hour = 60 minutes

6 hours = 6 × 60 minutes

= 360 minutes

(b) We know that,

1 hour = 60 minutes

19 hours = 19 × 60 minutes

= 1140 minutes

(c) We know that,

1 hour = 60 minutes

43 hours = 43 × 60 minutes

= 2580 minutes

(d) We know that,

1 hour = 60 minutes

78 hours = 78 × 60 minutes

= 4680 minutes

(e) We know that,

1 hour = 60 minutes

Therefore 5 hours 20 minutes = 5 × 60 minutes + 20 minutes

= 300 minutes + 20 minutes

= 320 minutes

(f) We know that,

1 hour = 60 minutes

78 hours = 78 × 60 minutes

= 4680 minutes

(g) We know that,

1 hour = 60 minutes

Therefore, 96 hours 6 minutes = 96 × 60 minutes + 6 minutes

= 5760 minutes + 6 minutes

= 5766 minutes

(h) We know that,

1 hour 60 minutes

Therefore, 36 Hours 40 minutes = 36 × 60 minutes + 40 minutes = 2160 minutes + 40 minutes

= 2200 minutes

(i) We know that,

1 hour = 60 minutes

Therefore, 87 hours 55 minute = 87 × 60 minutes + 55 minutes

= 5220 minutes + 55 minutes

= 5275 minutes

(j) We know that,

1 hour = 60 minutes

Therefore, 9 hours, 40 minutes = 9 × 60 minutes + 40 minutes

= 540 minutes + 40 minutes

= 580 minutes

(k) We know that,

1 hour = 60 minutes

Therefore, 77 hours 56 minutes

= 77 × 66 minutes + 56 minutes

= 4620 minutes + 56 minutes

= 4676 minutes

(l) We know that,

1 hour = 60 minutes

Therefore, 50 hours 12 minutes = 50 × 60 minutes + 12 minutes

= 3000 minutes + 12 minutes

= 3012 minutes

3. (a) We know that,

1 minute = 60 seconds

45 minutes = 45 × 60 seconds

= 2700 seconds

(b) We know that,

1 minute = 60 seconds

63 minutes = 63 × 60 seconds

= 3780 seconds

(c) We know that,

1 minute = 60 seconds

120 minutes = 120 × 60 seconds

= 7200 seconds

(d) We know that,

1 minute = 60 seconds

84 minutes = 84 × 60 seconds

= 5040

(e) We know that,

1 minute = 60 seconds

Therefore, 15 minutes 5 seconds = 15 × 60 seconds + 5 seconds

= 900 seconds + 5 seconds

= 905 seconds

(f) We know that,

1 minute = 60 seconds

Therefore, 98 minutes 18 seconds = 98 × 60 seconds + 18 seconds

= 5880 seconds + 18 seconds = 5898 seconds

(g) We know that,

1 minute = 60 seconds

Therefore, 55 minutes 39 seconds = 55 × 60 seconds + 39 seconds

= 3300 seconds + 39 seconds

= 3339 seconds

(h) We know that,

1 minute = 60 seconds

Therefore, 450 minutes = 450 × 60 seconds

= 27000 seconds + 60 seconds

= 27060 seconds

(i) We know that,

1 minute = 60 seconds

Therefore, 76 minutes 44 seconds = 76 × 60 seconds + 44 seconds

= 2760 seconds + 44 seconds

= 2804 seconds

(j) We know that,

1 minute = 60 seconds

Therefore, 36 minutes 22 seconds = 36 × 60 seconds + 22 seconds

= 2160 seconds + 22 seconds

= 2182 seconds

(k) We know that,

1 minute = 60 seconds

Therefore, 40 minutes 5 seconds =40 × 60 seconds = 5 seconds

= 2400 seconds + 5 seconds

= 2405 seconds

(l) We know that,

1 minute = 60 seconds

Therefore, 34 minutes 30 seconds = 34 × 60 seconds + 30 seconds

= 2040 seconds + 30 seconds

= 2070 seconds

4. Seema complete her maths homework = 45 minutes 30 seconds

Express the time in seconds = ?

We know that 1 minute = 60 seconds

Therefore, 45 minutes 30 seconds = 45 × 60 seconds + 30 seconds

= 2700 seconds + 30 seconds

= 2730 seconds

Thus, 45 minutes 30 seconds is equal to 2730 seconds.

5. A worker works for = 8 hours 20 minutes

Convert the time spent in to minutes = ?

We know that 1 hour = 60 minutes

Therefore, 8 hour 20 minutes = 8 × 60 minutes + 20 minutes

= 480 minutes + 20 minutes

= 500 minutes

Thus, 8 hours 20 minutes is equal to 500 minutes.

6. A documentary movie is of length = 2 hours 45 minutes

Express the length of the movie in minutes = ?

We know that 1 hour = 60 minutes

Therefore 2 hours 45 minutes = 2 × 60 minutes + 45 minutes

= 120 minutes + 45 minutes

= 165 minutes

Thus, 2 hours 45 minutes is equal to 165 minutes.

7. (a) 9 days convert into hours

We know that,

1 day = 24 hours

and, 9 days = 9 × 24 hours

= 216 hours

(b) 9 days or 216 hours convert into minutes

We know that, 1 day = 24 hours

9 days = 9 × 24 = 216 hours

and 1 hour = 60 minutes

So, 216 hours = 216 × 60 minutes

= 12960 minutes

(c) 9 days convert into seconds

We know that,

1 day = 24 hours

9 days = 9 × 24 hours = 216 hours

and 1 hour = 60 minutes

216 hours = 216 × 60 minutes
= 12960 minutes
and 1 minute = 60 seconds
So, 12960 minutes = 12960 × 60 seconds
= 777600 seconds
Thus, the total duration of 9 days trip is
(a) 216 hours (b) 12960 minutes (c) 777600 seconds

Practice Coach – 2 !

1. (a) We know that,

24 hours = 1 day

So, 62 hours = (62 ÷ 24) days

= 2 days 14 hours

```
    2
24)62
  -48
   14
```

(b) We know that,

24 hours = 1 days

Therefore, 480 hours = (480 ÷ 24) days

= 20 days

```
   20
24)480
  -480
    ×
```

(c) We know that,

24 hours = 1 day

So, 660 hours = (660 ÷ 24) days

= 27 days 12 hours

```
   27
24)660
  -48
  180
 -168
   12
```

(d) We know that,

24 hours = 1 day

So, 846 hours = (846 ÷ 24) days

= 35 days 6 hours

```
   35
24)846
  -72
  126
 -120
    6
```

(e) We know that,

24 hours = 1 day

So, 774 hours = (774 ÷ 24) days

= 32 days 6 hours

```
   32
24)774
  -72
   54
  -48
    6
```


(f) We know that,

24 hours = 1 day

So, 750 hours = (750 ÷ 24) days

= 31 days 6 hours

$$\begin{array}{r} 31 \\ 24\overline{)\,750} \\ -72 \\ \hline 30 \\ -24 \\ \hline 6 \end{array}$$

(g) We know that,

24 hours = 1 day

So, 948 hours = (948 ÷ 24) days

= 39 days of 8 hours

$$\begin{array}{r} 39 \\ 24\overline{)\,948} \\ -72 \\ \hline 228 \\ -216 \\ \hline 12 \end{array}$$

(h) We know that,

24 hours = 1 day

So, 392 hours = (392 ÷ 24) days

= 16 days 8 hours

$$\begin{array}{r} 16 \\ 24\overline{)\,392} \\ -24 \\ \hline 152 \\ -144 \\ \hline 8 \end{array}$$

(i) We know that,

24 hours = 1 day

So, 245 hours = (245 ÷ 24) days

= 10 days 5 hours

$$\begin{array}{r} 10 \\ 24\overline{)\,245} \\ -24 \\ \hline 05 \end{array}$$

(j) We know that,

24 hours = 1 day

So, 720 hours = (720 ÷ 24) days

= 30 days

$$\begin{array}{r} 30 \\ 24\overline{)\,720} \\ -720 \\ \hline \times \end{array}$$

(k) We know that,

24 hours = 1 day

So, 410 hours = (410 ÷ 24) days

= 17 days 2 hours

$$\begin{array}{r} 17 \\ 24\overline{)\,410} \\ -24 \\ \hline 170 \\ -168 \\ \hline 2 \end{array}$$

(l) We know that,

24 hours = 1 day

So, 288 hours = (288 ÷ 24) days

= 12 days

$$\begin{array}{r} 15 \\ 24\overline{)\,288} \\ -24 \\ \hline 48 \\ -48 \\ \hline 0 \end{array}$$

2. (a) We know that,

60 seconds = 1 minutes

So, 1200 seconds = (1200 ÷ 60) minutes

= 20 minutes

$$\begin{array}{r} 20 \\ 60\overline{)\,1200} \\ -1200 \\ \hline 0 \\ \hline \end{array}$$

(b) We know that,

60 seconds = 1 minutes

So, 870 seconds = (870 ÷ 60)

= 14 minutes 30 seconds

$$\begin{array}{r} 14 \\ 60\overline{)\,870} \\ -60 \\ \hline 270 \\ -240 \\ \hline 30 \\ \hline \end{array}$$

(c) We know that,

60 seconds = 1 minute

So, 660 minutes = (660 ÷ 60) minutes

= 11 minutes

$$\begin{array}{r} 11 \\ 60\overline{)\,660} \\ -60 \\ \hline 60 \\ -60 \\ \hline 0 \\ \hline \end{array}$$

(d) We know that,

60 seconds = 1 minute

So, 1335 seconds = (1335 ÷ 60) minutes

= 22 minutes 15 seconds

$$\begin{array}{r} 22 \\ 60\overline{)\,1335} \\ -120 \\ \hline 135 \\ -120 \\ \hline 15 \\ \hline \end{array}$$

(e) We know that,

60 seconds = 1 minute

So, 946 seconds = (946 ÷ 60) minutes

= 15 minutes 46 seconds

$$\begin{array}{r} 15 \\ 60\overline{)\,946} \\ -60 \\ \hline 346 \\ -300 \\ \hline 46 \\ \hline \end{array}$$

(f) We know that,

60 seconds = 1 minute

So, 1128 seconds = (1128 ÷ 60) minutes

= 18 minutes 48 seconds

$$\begin{array}{r} 18 \\ 60\overline{)\,1128} \\ -60 \\ \hline 528 \\ -480 \\ \hline 48 \\ \hline \end{array}$$

(g) We know that,

60 seconds = 1 minutes

So, 515 seconds = (515 ÷ 60) minutes

= 8 minutes 35 seconds

$$\begin{array}{r} 8 \\ 60\overline{)\,515} \\ -480 \\ \hline 35 \\ \hline \end{array}$$

(h) We know that,

60 seconds = 1 minute

So, 125 seconds = (125 ÷ 60) minutes

= 2 minutes 5 seconds

$$\begin{array}{r} 2 \\ 60\overline{)\ 125} \\ -120 \\ \hline 5 \end{array}$$

(i) We know that,

60 seconds = 1 minute

So, 332 seconds = (332 ÷ 60) minutes

= 5 minutes 32 seconds

$$\begin{array}{r} 5 \\ 60\overline{)\ 332} \\ -300 \\ \hline 32 \end{array}$$

(j) We know that,

60 seconds = 1 minute

So, 840 seconds = (840 ÷ 60) minutes

= 14 minutes

$$\begin{array}{r} 14 \\ 60\overline{)\ 840} \\ -60 \\ \hline 240 \\ -240 \\ \hline 0 \end{array}$$

(k) We know that,

60 seconds = 1 minutes

So, 729 seconds = (729 ÷ 60) minute

= 12 minute 9 seconds

$$\begin{array}{r} 12 \\ 60\overline{)\ 729} \\ -60 \\ \hline 129 \\ -120 \\ \hline 9 \end{array}$$

(l) We know that,

60 seconds = 1 minute

So, 452 seconds = (452 ÷ 60) minutes

= 7 minutes 32 seconds

$$\begin{array}{r} 7 \\ 60\overline{)\ 452} \\ -420 \\ \hline 32 \end{array}$$

3. (a) We know that,

60 minutes = 1 hour

So, 450 minutes = (450 ÷ 60) hours

= 7 hours 30 minutes

$$\begin{array}{r} 7 \\ 60\overline{)\ 450} \\ -420 \\ \hline 30 \end{array}$$

(b) We know that,

60 minutes = 1 hour

So, 900 minutes = (900 ÷ 60) hours

= 15 hours

$$\begin{array}{r} 15 \\ 60\overline{)\ 900} \\ -60 \\ \hline 300 \\ -300 \\ \hline 0 \end{array}$$

(c) We know that,

60 minutes = 1 hour

So, 1020 minutes = (1020 ÷ 60) hours

= 17 hours

$$\begin{array}{r} 17 \\ 60\overline{)\ 1020} \\ -60 \\ \hline 420 \\ -420 \\ \hline 0 \end{array}$$

(d) We know that,

60 minutes = 1 hour

So, 810 minutes = (810 ÷ 60) hour

= 13 hours 30 seconds

$$\begin{array}{r} 13 \\ 60\overline{)\,810} \\ -60 \\ \hline 210 \\ -180 \\ \hline 30 \end{array}$$

(e) We know that,

60 minutes = 1 hour

So, 700 minutes = (700 ÷ 60) hours

= 11 hours 40 minutes

$$\begin{array}{r} 11 \\ 60\overline{)\,700} \\ -60 \\ \hline 100 \\ -60 \\ \hline 40 \end{array}$$

(f) We know that,

60 minutes = 1 hour

So, 887 minutes = (887 ÷ 60) hours

= 14 hours 47 minutes

$$\begin{array}{r} 14 \\ 60\overline{)\,887} \\ -60 \\ \hline 287 \\ -240 \\ \hline 47 \end{array}$$

(g) We know that,

60 minutes = 1 hour

So, 480 minutes = (480 ÷ 60) hour

= 8 hours

$$\begin{array}{r} 8 \\ 60\overline{)\,480} \\ -480 \\ \hline 0 \end{array}$$

(h) We know that,

60 minutes = 1 hour

So, 546 minutes = (546 ÷ 60) hours

= 9 hours 6 minutes

$$\begin{array}{r} 9 \\ 60\overline{)\,546} \\ -540 \\ \hline 6 \end{array}$$

(i) We know that,

60 minutes = 1 hour

So, 155 minutes = (155 ÷ 60) hours

= 2 hours 35 minutes

$$\begin{array}{r} 2 \\ 60\overline{)\,155} \\ -120 \\ \hline 35 \end{array}$$

(j) We know that,

60 minutes = 1 hour

So, 725 minutes = (725 ÷ 60) hours

= 12 hours 5 minutes

$$\begin{array}{r} 12 \\ 60\overline{)\,725} \\ -60 \\ \hline 125 \\ -120 \\ \hline 05 \end{array}$$

(k) We know that,

60 minutes = 1 hour

So, 300 minutes = (300 ÷ 60) hours

= 5 hours

$$\begin{array}{r} 5 \\ 60\overline{)\,300} \\ -300 \\ \hline 0 \end{array}$$

(l) We know that,

60 minutes = 1 hour

So, 98 minutes = (98 ÷ 60) hours

= 1 hour 38 minutes

```
   1
60)98
  -60
  38
```

4. A car takes time to go around a circular path = 654 seconds

The time taken in minutes and seconds = ?

We know that, 60 second = 1 minute

So, 654 seconds = (654 ÷ 60) minutes

= 10 minutes 54 seconds

Thus, 654 seconds is equal to 10 minutes 54 seconds

```
   10
60)654
  -60
   54
```

5. We know that,

60 minutes = 1 hour

So, 888 minutes = (888 ÷ 60) hours

= 14 hours 48 minutes

Thus, 888 minutes is equal to 14 hours 48 minutes.

```
   14
60)888
  -60
  288
 -240
   48
```

6. We know that,

24 hours = 1 day

So, 585 hours = (585 ÷ 24) days

= 24 days 9 hours.

Thus, 585 hours is equal to 24 days 9 hours.

```
   24
24)585
  -48
  105
  -96
    9
```

Practice Coach – 3 !

1. (a)

	Hours		Minutes
Finishing Time	7	:	12
Time Duration	– 4	:	00
Starting Time	3	:	12

(b)

	Hours		Minutes
Finishing Time	9	:	40
Time Duration	– 6	:	10
Starting Time	3	:	30

(c)

	Hours		Minutes
Finishing Time	11	:	56
Time Duration	– 5	:	25
Starting Time	6	:	31

(d)

	Hours		Minutes
Finishing Time	12	:	00
Time Duration	– 10	:	48
Starting Time	1	:	12

2. (a) Starting time = 8 : 48 p.m.

Finishing time = 11 : 55 p.m.

Time Duration = Finishing Time – Starting Time

= 11 : 55 p.m. – 8 : 48 p.m.

= 3 hours 07 min

Hours		Minute
11	:	55
– 8	:	48
3	:	07

(b) Starting Time = 12 midnight
= 4 : 32 a.m.
12 midnight = 00 : 00 a.m.
Time duration = Finishing Time – Starting Time
= 4 : 32 a.m. – 00 : 00 a.m.
= 4 hours 32 min

Hours		Minutes
4	:	32
– 00	:	00
4	:	32

(c) Starting Time = 3 : 20 a.m.
Finishing Time = 10 : 15 a.m.
Time duration = Finishing Time – Starting Time
= 10 : 15 a.m. – 3 : 20 a.m.
= 6 hours 55 min

Hours		Minutes
10	:	15
– 3	:	20
6	:	55

(d) Starting Time = 4 : 26 p.m.
Finishing Time = 11 : 34 p.m.
Time duration = Finishing Time – Starting Time
= 11 : 34 p.m. – 4 : 26 p.m.
= 7 hours 08 min

Hours		Minutes
11	:	34
– 4	:	26
7	:	08

3. (a) Starting Time = 2 : 10 a.m.
Time duration = 3 hours 20 minutes
Finishing Time = Starting Time + Time duration
= 2 : 10 a.m. + 3 hours 20 minutes
= 5 : 30 a.m.

Hours		Minutes
2	:	10
+ 3	:	20
5	:	30

(b) Starting Time = 7 : 35 a.m.
Time duration = 7 hours 45 minutes
Finishing Time = Starting Time + Time duration
= 7 : 35 a.m. + 7 hours 45 mint
= 15 : 20 p.m.
According 12 O'clock = 15 : 20 p.m. – 12
= 3 : 20 p.m.

Hours		Minutes
7	:	35
+ 7	:	45
15	:	20

(c) Starting Time = 3 : 05 p.m.
Time duration = 5 hours 20 minutes
Finishing Time = Starting Time + Time duration
= 3 : 05 p.m. + 5 hours 20 minutes
= 8 : 25 p.m.

Hours		Minutes
3	:	05
+ 5	:	20
8	:	25

(d) Starting Time = 5 : 10 a.m.
Time duration = 14 hours 50 minutes
Finishing Time = Starting Time + Time duration
= 5 : 10 a.m. + 14 hours 50 minutes
= 20 : 00 p.m.
According 12 O'clock = 20 : 00 p.m. – 12

Hours		Minutes
5	:	10
+ 14	:	50
20	:	00

4. (a) Finishing date = 15th August
Time duration = 11 days
So, Starting date = 15 – 11
(b) Finishing date = 2nd March
Time duration = 22 days
Starting Time = 2nd March – 22 days
= 2 days of March and
Feburary has day = 29 days
The days of Feburary = 20
So, = 29 – 20 = 9
Therefore, starting date = 9 Feburary
(c) Finishing date = 20th May
Time duration = 35 days
Starting date = 20 days of May and 155 days of April
April has days = 30
So, = 30 – 15 days
= 15 April
So, the starting date = 15 April
(d) Finishing date = 14th November
Time duration = 40 days
Starting time = 14 days of November and 26 days of October
Therefore, starting time = 31 – 26 = 5
= 5 October.

5. (a) Starting data = 26th May
Finishing date = 25 September
Time duration = 31 – 25 days = 6 days of May
Therefore = 6 days of May + 30 days of June + 31 days of July + 31 days of August + 25 days of September = 123 days
(b) Starting date = 1st March
Finishing date = 28 March
Time duration = 28 days
(c) Starting date = 15th October
Finishing date = 15th November
Time duration = 17 days of October + 15th days of November
= 32 days
(d) Starting date = 20th June
Finishing date = 17th November
Time duration = 11 days of June + 31 days of July + 31 days of August + 17 days of November = 90 days

6. (a) Starting date = 11th September
Time duration = 25 days
Finishing date = 20 days of september and 5 days of October
= 5 October
(b) Starting date = 20th January
Time duration = 25 days
Finishing date = 12 days of January and 13 days of February
So, = 13 February
(c) Starting date = 14th April
Time duration = 21 days
Finishing date = 17 days of April and 4 days of June = 4 June
(d) Starting date = 27th May
Time duration = 44 days
Finishing date = 5 days of May, 30 days of June and 9 days of July
So, Finishing date = 9 July

7. Harsh and Harshit are twin brothers.
Harsh joined the school when he was = 3 years 1 month old
Harshit joined after Harsh = 1 year 8 months
The age of Harshit when he joined the school = 3 years 1 month
+ 1 year 8 month
= 4 year 9 month
Thus, the age of Harshit is 4 years 9 months when he joined the school.

8. A movie started at = 6 : 40 p.m.
The movie finished at = 10 : 10 p.m.
The time duration of the movie = Finishing time – Starting time
= 10 : 10 p.m. – 6 : 40 p.m.
= 3 hours 30 minutes
Thus, the time duration of the movie is 3 hours 30 minutes.

9. The days of 15th August to 18th September = 15 days of August
+ 18 days of September = 35 days
Thus, the total days of 15th August to 18th September are 35 days.

10. The age of Amit = 10 years 8 months
His father is elder to him = 30 years 9 months
The age of his father = 10 years 8 months + 30 years 9 months
= 41 years 5 months
Thus, the age of his father is 41 years 5 months.

Practice Coach – 4 !

1. (a) Temperature (b) Thermometer (c) Centigrade, Fahrenheit (d) Fahrenheit **2.** (a) Temperature in Fahrenheit scale = 41°F

Therefore, temperature in celsius = $(°F - 32) \times \frac{5}{9}$

$= (41 - 32) \times \frac{5}{9}$

$= 9 \times \frac{5}{9}$

$= 5°\ C$

(b) Temperate in Fahrenheit scale = 167°F

Therefore, temperature in celsius = $(°F - 32) \times \frac{5}{9}$

$= (167 - 32) \times \frac{5}{9}$

$= 135 \times \frac{5}{9}$

$= 75°C$

(c) Temperature in Fahrenheit scale = 68°F

Therefore, temperature in celsius = $(°F - 32) \times \frac{5}{9}$

$= (68 - 32) \times \frac{5}{9}$

$=36 \times \frac{5}{9}$

$= 20°C$

(d) Temperature in Fahrenheit scale = 212°F

Therefore, temperature in celsius = $(°F - 32) \times \frac{5}{9}$

$= (212°F - 32) \times \frac{5}{9}$

$= 180 \times \frac{5}{9}$

$= 100$

(e) Temperature in Fahrenheit scale = 122°F

Therefore, temperature in celsius = $(°F - 32) \times \frac{5}{9}$

$= (122 - 32) \times \frac{5}{9}$

$= 90 \times \frac{5}{9}$

$= 50°c$

(f) Temperature in Fahrenheit scale = 158°F

Therefore, temperature in celsius = $(°F - 32) \times \frac{5}{9}$

$= (158 - 32) \times \frac{5}{9}$

$= 126 \times \frac{5}{9}$

$= 70°C$

3. (a) Temperature in celsius = 35°C

Therefore, temperature in Fahrenheit = $°C \times \frac{9}{5} + 32$

$= 35 \times \frac{9}{5} + 32$

$= 63 + 32$

$= 95°F$

(b) Temperature in celsius = 45°C

Therefore, temperature in Fahrenheit = $°C \times \frac{9}{5} + 32$

$= 45 \times \frac{9}{5} + 32$

$= 81 + 32$

$= 113°F$

(c) The temperature in celsius = 10°C

Therefore, tempertuer in Fahrenheit = $°C \times \frac{9}{5} + 32$

$= 10° C \times \frac{9}{5} + 32$

$= 18 + 32$

$= 50°F$

(d) (e) and (f) similer as (a) (b) and (c)

So, these sums students do your self.

Chapter 13

Maths in Real Life

1. (a) CP = ₹ 124

SP = ₹ 153

CP < SP

Profit = SP – CP

= 153 – 124

= ₹ 29

(b) CP = ₹ 345

SP = ₹ 550

CP < SP

Profit = SP – CP

= ₹ 550 – ₹ 345

= ₹ 205

(c) CP = ₹ 2,878
SP = ₹ 1,878
CP > SP
Loss = CP – SP
= ₹ 2878 – ₹ 1878
= ₹ 1000

(d) CP = ₹ 2,456
SP = ₹ 1675
CP > SP
Loss = CP – SP
= ₹ 2456 – ₹ 1675
= ₹ 780

(e) CP = ₹ 32323
SP = ₹ ₹ 43454
CP < SP
Profit = SP – CP
= ₹ 48454 – ₹ 32323
= ₹ 11131

(f), (g), (h), (i) and (j) questions as similer as (a), (b), (c), (d) and (e), So, students these questions do your self.

2. The cost price of a T-shirt = ₹ 343
The shopkeeper sells it = ₹ 544
The profit made by the shopkeeper = SP – CP
= ₹ 544 – ₹ 343
= ₹ 201
Thus, ₹ 201 profit made by the shopkeeper.

3. Rohan purchased a scooty = ₹ 30,257
He spent for repairing it = ₹ 425
He sold the scooty = ₹ 30,500
Rohan total spent money for scooty = ₹ 30257 + ₹ 425
= 30,682
So, ₹ 30682 > 30500
Loss = CP – SP
= ₹ 30682 – ₹ 30500
= ₹ 182
Thus, the loss is ₹ 182.

4. A shopkeeper bought packets of chocolates = 20
The rate of each packet = ₹ 35
The rate of 20 packets = ₹ 35 × 20
= ₹ 700
He sold all packets = ₹ 1000
So, ₹ 700 < ₹ 1000
The profit = SP – CP
= ₹ 1000 – ₹ 700
= ₹ 300
Thus, his profit is ₹ 300.

5. A shopkeeper bought tables = 10

The rate of each table = ₹ 60

So, the rate of 10 tables = ₹ 60 × 10 = ₹ 600

He bought chairs = 60

The rate of each chair = ₹ 40

So, the rate of 60 chairs = 60 × ₹ 40

= ₹ 2400

The total cost of all tables and chairs = ₹ 600 + ₹ 2400

= ₹ 3000

The total number of all chairs and tables = 10 + 60 = 70

He sold each = ₹ 50

He sold 70 tables and chairs = 70 × ₹ 50

= ₹ 3500

then, ₹ 3000 < ₹ 3500

The profit = SP – CP

= ₹ 3500 – ₹ 3000

= ₹ 500

Thus, his profit is ₹ 500.

Practice Coach – 2 !

1. (a) SP = ₹ 435.65

P = ₹ 12.27

CP = SP – P

= ₹ 435.65 – ₹ 12.75

= ₹ 422.9

(b) SP = ₹ 475

L = ₹ 35

CP = SP + L

= ₹ 475 + ₹ 35

= ₹ 510

(c) SP = ₹ 7055.00

P = ₹ 501.25

CP = SP – P

= ₹ 7055 + ₹ 501.25

= ₹ 7055

(d) SP = ₹ 785.25

L = ₹ 2.75

CP = SP + L

= ₹ 785.25 + ₹ 2.75

= ₹ 788

(e) SP = ₹ 87,654

P = ₹ 11,654

CP = SP – P

= ₹ 87,654 – ₹ 11,654

= 76000

(f) SP = ₹ 342

L = ₹ 94

CP = SP + L

= ₹ 342 + ₹ 94

= ₹ 436

(g) SP = ₹ 87,654
P = ₹ 11,654
CP = SP – P
= ₹ 87654 – ₹ 11654
= ₹ 76000

2. A dealer sold a bicycle to a customer = ₹ 4,700
He making profit to it = ₹ 200
The cost price of a bicycle = SP – P
= ₹ 4700 ₹ 200
= ₹ 4500
Thus, the cost price of the bicycle is ₹ 4500.

3. Mr. Singh sold a washing machine at a loss of = ₹ 1800
The selling price of the washing machine = ₹ 11800
The cost price of the machine = SP + L
= ₹ 11800 + ₹ 1800
= 13600
Thus, the cost price of a machine is ₹ 13600.

4. Subhash cold his digital camera = ₹ 8,820.
The loss of on it = ₹ 1280
The cost price of the digital camera = SP + L
= 8820 + ₹ 1280
= ₹ 10100

Practice Coach – 3 !

1. (a) CP = ₹ 1050
P = ₹ 175
SP = CP + P
= ₹ 1050 + ₹ 175
= ₹ 1225

(b) CP = ₹ 234
L = ₹ 66
SP = CP – L
= ₹ 234 – ₹ 66
= ₹ 168

(c) CP = ₹ 868
P = ₹ 74
SP = CP + P
= ₹ 868 + ₹ 74
= ₹ 942

(d) CP = ₹ 1324
L = ₹ 149
SP = CP – L
= ₹ 1324 – ₹ 149
= ₹ 1175

(e) CP = 54,638
L = ₹ 447
SP = CP – L
= ₹ 54638 – ₹ 447
= ₹ 54191

(f) CP = ₹ 475
P = ₹ 12.50
SP = CP + P
= ₹ 475 + ₹ 12.50
= ₹ 487.5

2. A shopkeeper bought a table for = ₹ 550
He sold it at a profit of = ₹ 120
The selling price of the table = CP + P
= ₹ 550 + ₹ 120
= ₹ 670

3. A merchant bought a TV = ₹ 9990
He sold it at a profit of = ₹ 450
The selling price of TV = CP + P
= ₹ 9990 + ₹ 450
= ₹ 10440

4. Kavita sold her cosia at a loss of = ₹ 1250
She had bought at = 5000
The selling price of the casio = CP – L
= ₹ 5000 – ₹ 1250
= ₹ 3750

5. A man bought a study table = ₹ 12,986
He made loss = ₹ 1340
The selling price = CP + L
= ₹ 12,986 + ₹ 1340
= ₹ 14326

Practice Coach – 4 !

1. Dhruv bought 3 m cloth = ₹ 270
The cost of 1 m cloth = ₹ 270 ÷ 3
Therefore, the cost of 7 m cloth = ₹ 90 × 7
= ₹ 630

2. The cost of 5 kg apples = ₹ 600
The cost of 1 kg apples = ₹ 600 ÷ 5
= ₹ 120
Therefore, the cost of 27 kg apples = ₹ 120 × 27
= ₹ 3240

3. A bus can travel in 3 hours = 120 km
The bus can travel in one hour = 120 ÷ 3
= 40 km
The bus can travel in 9 hours = 40 km × 9
= 360 km

4. 6 packets can hold candies = 42
1 packet can hold candies = 42 ÷ 6
= 7
So, 14 packets can hold candies = 7 × 14
= 98 candies

5. A train cover distance in 1 hour= 120 km
The train cover distance of 960 km = 960 km ÷ 120 km
= 8 hours
Thus, the train can cover distance 960 km in 8 hours.

Chapter 14

Mapping Skills

Practice Coach – 1 !

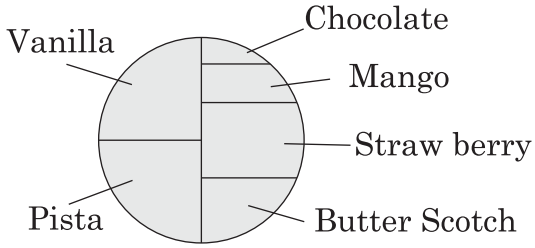
1. Do your self
2. (a) Station road to Vivekanand road and from there take left to Ganesh Marg.
   (b) Kasturba marg and Airport road (c) Mahatma Gandhi road and bazar road. (e) North then west; North; East then North; East South.
3. (a) North; Maharashtra, Madhaya Pradesh and Rajasthan (b) Jammu and Kashmir (c) Rajasthan (d) West Bengal, Orissa, Andhra Pradesh, Tamil Nadu, kerela, Karnataka, Goa, Maharashtra and Gujarat (e) Goa (f) South (g) 3,24,000 km (h) Kerala

Chapter 15

Data Handling

Practice Coach – 1 !

1.



2. (a) Burger (b) Chips (c) Biscuits (d) 45% (e) 10%
3. Winter : 3 months; Monsoon : 2 months; spring : 1 month; Autumn : 2 months; Summer : 4 months;

Practice Coach – 2 !

1. (a)

Items	Frequency
4	7
5	8
6	5
7	6
8	2

(b)

Colours	Tally Marks
Red	𝍸 𝍸
Blue	𝍸
Green	𝍸 𝍸 ||
Pink	𝍸 𝍸 𝍸 |||
Yellow	𝍸 |

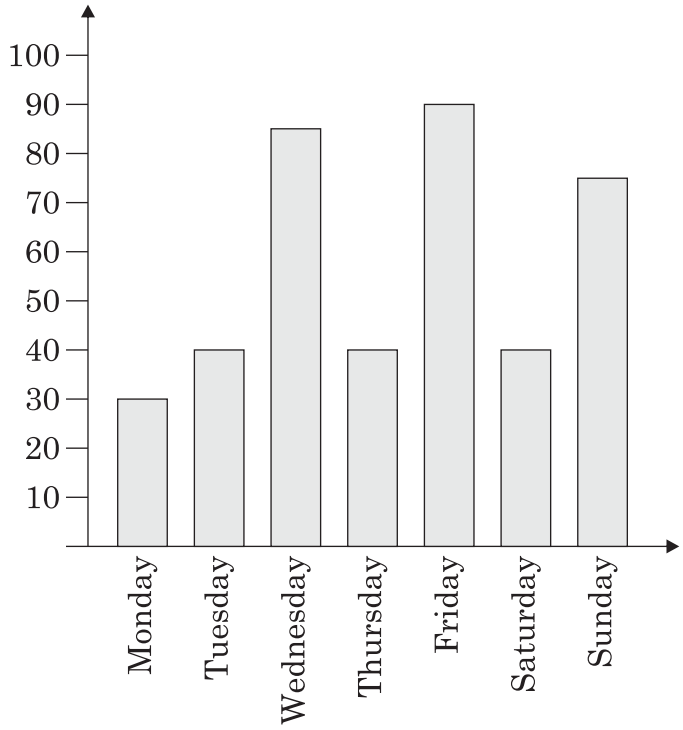
2.

Tally Marks	Frequency
𝍸 𝍸 𝍸 𝍸 𝍸	25
𝍸 𝍸 𝍸 |||	18
𝍸 𝍸 𝍸 𝍸 |||	23
𝍸 𝍸 𝍸 |	16

3. (a) 135 students (b) 65 (c) Piano and Light Music (d) 2

Practice Coach – 3 !

1.



2. (a) 25 kg (b) 15 kg (c) 5 years old (d) 5 kg (e) 20 kg