

1. Fill in the blanks with correct number names :

- Ans. a. 8236 Eight thousand two hundred thirty-six.
 b. 7141 Seven thousand one hundred forty-one.
 c. 9657 Nine thousand six hundred fifty-se ven.
 d. 6313 Six thousand three hundred thirteen.

2. Fill in the blanks with correct numerals :

- Ans. a. Nine thousand sixty-seven 9067
 b. Eight hundred seven 807
 c. Eight thousand eight hundred twenty-nine 8829
 d. Five thousand six hundred twenty-eight 5628

3. Write the place values of coloured digits :

- Ans. a. 3 8 6 5 3000 b. 3 4 8 7 80
 c. 4 5 6 3 3 d. 7 5 2 1 1

4. Write the following in expanded form :

- Ans. a. 3412 3000 + 400 + 10 + 2
 b. 8162 8000 + 100 + 60 + 2
 c. 4713 4000 + 700 + 10 + 3
 d. 4116 4000 + 100 + 10 + 6

5. Fill in the blanks :

- Ans. a. 2134 comes just after **2133**. b. **6575** comes just before 6576.
 c. 3112 comes just after **3111**. d. **8775** comes just before 8776.

6. See the pattern and write the missing number :

- Ans. a. 1800, 1500, 1200, **900**. b. 1400, 1300, 1200, **1100**.
 c. 5421, 5221, 5021, **4821**. d. 6000, 4500, 3000, **1500**.

7. Using all the four digits 2, 4, 3 and 7. Write greatest and smallest 4-digit numbers. Then add the largest number of these to the smallest.

- Ans. The smallest number using digits 2, 4, 3 and 7 = 2347
 And, the greatest number using digits 2, 4, 3 and 7 = 7432
 Now, their Addition = 2347 + 7432
 = 9779.

2	3	4	7
+	7	4	3

9	7	7	3

8. Compare using > or < symbol in the blanks :

- Ans. a. 2662 > 2462 b. 5281 > 4318
 c. 3141 < 3333 d. 6421 > 6412
 e. 5711 > 5373 f. 6052 < 6312

g. 6511 $\begin{matrix} > \\ \hline \end{matrix}$ 5114

h. 4114 $\begin{matrix} > \\ \hline \end{matrix}$ 4042

i. 4414 $\begin{matrix} < \\ \hline \end{matrix}$ 6212

j. 3144 $\begin{matrix} > \\ \hline \end{matrix}$ 2144

9. Write the following numbers in short form :

Ans. a. $6000 + 800 + 70 + 9$ $\begin{matrix} \text{6879} \\ \hline \end{matrix}$ b. $3000 + 800 + 30 + 4$ $\begin{matrix} \text{3834} \\ \hline \end{matrix}$

c. $4000 + 700 + 30 + 3$ $\begin{matrix} \text{4733} \\ \hline \end{matrix}$ d. $6000 + 900 + 40 + 7$ $\begin{matrix} \text{6947} \\ \hline \end{matrix}$

10. Write the following numbers in ascending order :

Ans. a. 545, 8787, 95, 4 4 95 545 8787

b. 632, 9871, 83, 6 6 83 632 9871

c. 4, 29, 8767, 697 4 29 697 8767

d. 9, 13, 2432, 876 9 13 876 2432

11. Write the following numbers in descending order :

Ans. a. 8, 3675, 2887, 311, 87 3675 2887 311 87 8

b. 66, 6, 6066, 666 6066 666 66 6

c. 9, 12, 8347, 659, 2111 8347 2111 659 12 9

d. 4, 40, 4400, 400 4400 400 40 4

12. Find the sum of the following :

a. $\begin{matrix} \textcircled{1} & & & & \\ 8 & 7 & 2 & & \\ 9 & 3 & 2 & & \\ + & 6 & 4 & 3 & \\ \hline 2 & 4 & 4 & 7 & \end{matrix}$

b. $\begin{matrix} \textcircled{1} \textcircled{2} & & & & \\ 4 & 0 & 4 & & \\ 5 & 5 & 8 & & \\ + & 3 & 4 & 8 & \\ \hline 1 & 3 & 1 & 0 & \end{matrix}$

c. $\begin{matrix} \textcircled{1} \textcircled{1} & & & & \\ 7 & 9 & 2 & & \\ 6 & 4 & 1 & & \\ + & 3 & 4 & 8 & \\ \hline 1 & 7 & 8 & 1 & \end{matrix}$

d. $\begin{matrix} \textcircled{2} & & & & \\ 2 & 4 & 6 & & \\ 3 & 0 & 8 & & \\ + & 1 & 2 & 8 & \\ \hline 6 & 8 & 2 & & \end{matrix}$

13. Find :

a. $\begin{matrix} \text{kg} & \text{g} \\ 34 & 314 \\ 67 & 647 \\ + 21 & 542 \\ \hline 123 & 503 \end{matrix}$

b. $\begin{matrix} \text{kg} & \text{g} \\ 411 & 622 \\ - 212 & 264 \\ \hline 199 & 358 \end{matrix}$

c. $\begin{matrix} \text{kg} & \text{g} \\ 68 & 118 \\ 22 & 423 \\ + 57 & 762 \\ \hline 148 & 303 \end{matrix}$

d. $97 \text{ kg } 22 \text{ g} \times 7$

$\begin{matrix} \text{kg} & \text{g} \\ 97 & 022 \\ & \times 7 \\ \hline 679 & 154 \end{matrix}$

e. $777 \text{ kg } 910 \text{ g} \div 7$

$\begin{matrix} 7 \overline{) 777.910} & (111 \text{ kg } 130 \text{ g}) \\ - 777 & \\ \hline & 9 \\ & - 7 \\ \hline & 21 \\ & - 21 \\ \hline & 0 \end{matrix}$

f. $112 \text{ kg } 50 \text{ g} \times 8$

$\begin{matrix} \text{kg} & \text{g} \\ 112 & 050 \\ & \times 8 \\ \hline 896 & 400 \end{matrix}$

14. Find :

a. $\begin{matrix} \text{l} & \text{ml} \\ 29 & 345 \\ + 254 & 765 \\ \hline 385 & 154 \\ 669 & 264 \end{matrix}$

b. $\begin{matrix} \text{l} & \text{ml} \\ 987 & 623 \\ - 523 & 218 \\ \hline 464 & 405 \end{matrix}$

c. $\begin{matrix} \text{l} & \text{ml} \\ 111 & 527 \\ + 308 & 219 \\ + 712 & 102 \\ \hline 1131 & 848 \end{matrix}$

d. $92/420 \text{ m} \times 5$

$$\begin{array}{r} \text{l} \quad \text{m} \\ 62 \quad 420 \\ \times 5 \\ \hline 312 \quad 100 \end{array}$$

e. $887/114 \text{ m} \times 8$

$$\begin{array}{r} \text{l} \quad \text{m} \\ 887 \quad 014 \\ \times 8 \\ \hline 7096 \quad 112 \end{array}$$

f. $408/24 \text{ m} \div 9$

$$\begin{array}{r} 9 \overline{) 408.024} \quad (45/336 \text{ m} \\ -36 \\ \hline 48 \\ -45 \\ \hline 30 \\ -27 \\ \hline 32 \\ -27 \\ \hline 54 \\ 54 \\ \hline x \end{array}$$

15. Subtract:

a.
$$\begin{array}{r} 4 \quad 7 \quad 3 \\ -2 \quad 4 \quad 2 \\ \hline 2 \quad 3 \quad 1 \end{array}$$

b.
$$\begin{array}{r} 6 \quad 5 \quad 7 \\ -3 \quad 5 \quad 2 \\ \hline 3 \quad 0 \quad 5 \end{array}$$

c.
$$\begin{array}{r} 6 \quad 8 \quad 4 \quad 3 \\ -3 \quad 4 \quad 3 \quad 7 \\ \hline 3 \quad 4 \quad 0 \quad 6 \end{array}$$

16. Multiply:

a.
$$\begin{array}{r} 2 \quad 4 \\ \times 7 \\ \hline 1 \quad 6 \quad 8 \end{array}$$

b.
$$\begin{array}{r} 2 \quad 3 \\ \times 6 \\ \hline 1 \quad 3 \quad 8 \end{array}$$

c.
$$\begin{array}{r} 4 \quad 1 \quad 3 \quad 5 \\ \times 4 \\ \hline 1 \quad 6 \quad 5 \quad 4 \quad 0 \end{array}$$

17. Divide:

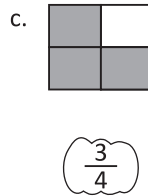
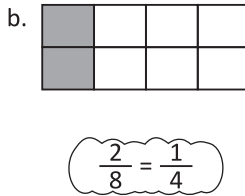
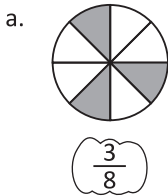
a.
$$\begin{array}{r} 212 \\ 4 \overline{) 848} \\ -8 \\ \hline 4 \\ -4 \\ \hline 8 \\ -8 \\ \hline x \end{array}$$

b.
$$\begin{array}{r} 94 \\ 9 \overline{) 846} \\ -81 \\ \hline 36 \\ -36 \\ \hline x \end{array}$$

c.
$$\begin{array}{r} 51 \\ 8 \overline{) 408} \\ -40 \\ \hline 8 \\ -8 \\ \hline x \end{array}$$

d.
$$\begin{array}{r} 61 \\ 6 \overline{) 366} \\ -36 \\ \hline 6 \\ -6 \\ \hline x \end{array}$$

18. Write fraction of each of the following figure is shaded portion :



19. Fill in the blanks :

a. $\frac{4}{16} + \frac{2}{16} = \frac{6}{16} = \frac{3}{8}$

b. $\frac{9}{35} + \frac{8}{35} = \frac{17}{35}$

c. $\frac{9}{13} + \frac{4}{13} = \frac{13}{13} = 1$

d. $\frac{8}{20} - \frac{6}{20} = \frac{2}{20} = \frac{1}{10}$

e. $\frac{35}{47} - \frac{13}{47} = \frac{22}{47}$

f. $\frac{36}{59} - \frac{14}{59} = \frac{26}{59}$

20. Write the equivalent fraction by filling the boxes :

a. $\frac{2}{3} = \frac{8}{12}$

b. $\frac{1}{8} = \frac{5}{40}$

c. $\frac{2}{7} = \frac{8}{28}$

d. $\frac{12}{42} = \frac{2}{7}$

e. $\frac{3}{4} = \frac{18}{24}$

f. $\frac{15}{24} = \frac{5}{8}$

21. Add :

a.
$$\begin{array}{r} \text{₹} \quad \text{p} \\ 22 \quad 43 \\ + 17 \quad 44 \\ \hline 39 \quad 87 \end{array}$$

b.
$$\begin{array}{r} \text{₹} \quad \text{p} \\ 132 \quad 25 \\ + 367 \quad 74 \\ \hline 499 \quad 99 \end{array}$$

c.
$$\begin{array}{r} \text{₹} \quad \text{p} \\ 324 \quad 64 \\ + 93 \quad 25 \\ \hline 417 \quad 89 \end{array}$$

d.
$$\begin{array}{r} \text{₹} \quad \text{p} \\ 168 \quad 95 \\ + 117 \quad 58 \\ \hline 286 \quad 53 \end{array}$$

22. Subtract :

a.
$$\begin{array}{r} \text{₹} \quad \text{p} \\ 84 \quad 44 \\ - 25 \quad 13 \\ \hline 59 \quad 31 \end{array}$$

b.
$$\begin{array}{r} \text{₹} \quad \text{p} \\ 388 \quad 28 \\ - 144 \quad 12 \\ \hline 244 \quad 16 \end{array}$$

c.
$$\begin{array}{r} \text{₹} \quad \text{p} \\ 628 \quad 41 \\ - 244 \quad 29 \\ \hline 384 \quad 12 \end{array}$$

d.
$$\begin{array}{r} \text{₹} \quad \text{p} \\ 348 \quad 67 \\ - 208 \quad 05 \\ \hline 140 \quad 62 \end{array}$$

23. Solve the following :

- Ans.** a. Cost of 6 books = ₹ 384
So, the cost of one book = ₹ 384 ÷ 6
= ₹ 64.

$$\begin{array}{r} 64 \\ 6 \overline{) 384} \\ \underline{-36} \\ 24 \\ \underline{-24} \\ 0 \end{array}$$

- b. Number of buses went on a picnic = 6
Each bus carried children = 55
So, the total number of children went on the picnic = 55 × 6
= 330 children.

$$\begin{array}{r} 55 \\ \times 6 \\ \hline 330 \end{array}$$

- c. Weight of 6 boxes = 2 kg 622 g
= 2.622 kg
So, the weight of each box = (2.622 ÷ 6) kg
= 0.437 kg
= 437 grams.

$$\begin{array}{r} 0.437 \\ 6 \overline{) 2.622} \\ \underline{-24} \\ 22 \\ \underline{-18} \\ 42 \\ \underline{-42} \\ 0 \end{array}$$

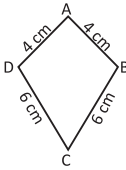
- d. There are 366 days in a leap year.
- e. Anita gets up = at 7 am
She laves for office = at 9:10 am
∴ Time duration = 7 am $\xrightarrow{2 \text{ hr}}$ 9 am $\xrightarrow{10 \text{ min}}$ 9:10 am
= 2 hours 10 minutes
So, Anita takes 2 hours 10 minutes daily to get ready.

- f. A worker earns every month = ₹ 925
 So, he will earn in 8 months = ₹ 925×8
 = ₹ 7400

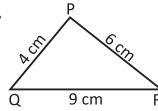
$$\begin{array}{r} 925 \\ \times 8 \\ \hline 7400 \end{array}$$

24. Find the perimeter of each of the following figures :

a.



b.



- Ans. AB = 4 cm
 BC = 6 cm
 CD = 6 cm
 DA = 4 cm

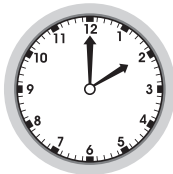
- PQ = 4 cm
 QR = 9 cm
 RP = 6 cm

Perimeter = $4 + 9 + 6 = 19$ cm.

Perimeter = $4 + 6 + 6 + 4 = 20$ cm.

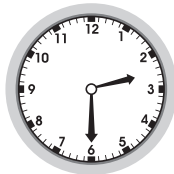
25. Write the time shown by each clock :

Ans. a.



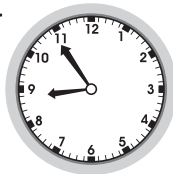
2:00 o'clock

b.



2:30 o'clock

c.



8:55 o'clock

26. The pictograph given below, show the number of students of class IV who dance, climb, sing and swim :

Dancers	
Climbers	
Singers	
Swimmers	

Read the pictograph and answer the following questions :

- Ans. a. There are 6 swimmers in the class.
 b. There are 4 climbers in the class.
 c. Climbers are in minimum number in the class.
 d. There are total 22 students in the class.

Exercise 2

1. Fill in by writing the number in Hindu-Arabic notation :

(i)	Roman Numerals	IV	VI	IX	XI	VIII
	Hindu-Arabic Notation	4	6	9	11	8

(ii) Roman Numerals Hindu-Arabic Notations

- Ans. a. XXVI = $10 + 10 + 6 = 16$
 b. XXXVIII = $10 + 10 + 10 + 8 = 38$
 c. XLIII = $(50 - 10) + 3 = 43$
 d. XXXI = $10 + 10 + 10 + 1 = 31$
 e. XXI = $10 + 10 + 1 = 21$
 f. XL = $50 - 10 = 40$
 g. XXXIV = $10 + 10 + 10 + 4 = 34$
 h. XXVI = $10 + 10 + 6 = 26$
 i. XLVIII = $(50 - 10) + 8 = 48$
 j. XV = $10 + 5 = 15$
 k. XLII = $(50 - 10) + 2 = 42$
 l. XLVI = $(50 - 10) + 6 = 46$

2. Fill in by writing the numbers in Roman Notation :

- Ans. Hindu-Arabic Numerals Roman Notation
- a. 23 = $10 + 10 + 3 = XXIII$
 b. 29 = $10 + 10 + 9 = XXIX$
 c. 34 = $10 + 10 + 10 + 4 = XXXIV$
 d. 39 = $10 + 10 + 10 + 9 = XXXIX$
 e. 42 = $(50 - 10) + 2 = XLII$
 f. 49 = $(50 - 10) + 9 = XLIX$
 g. 15 = $10 + 5 = XV$
 h. 26 = $10 + 10 + 6 = XXVI$
 i. 37 = $10 + 10 + 10 + 7 = XXXVII$
 j. 32 = $10 + 10 + 10 + 2 = XXXII$
 k. 41 = $(50 - 10) + 1 = XLI$
 l. 46 = $(50 - 10) + 6 = XLVI$
 m. 25 = $10 + 10 + 5 = XXV$

3. Complete the following :

- Ans. a. XXX, XXIX, XXVIII, XXVII, XXVI, XXV, XXIV, XXIII,
 b. L, XLIX, XLVIII, XLVII, XLVI, XLV, XLIV, XLIII

- c. XXXIX, XL, **XLI, XLII, XLIII, XLIV, XLV, XLVI**
 d. XXXIII, **XXXIV, XXXV, XXXVI, XXXVII, XXXVIII, XXXIX, XL**

4. Fill in the box with > or < :

- Ans.** a. XXXVII $\left(< \right)$ XLVI b. XXV $\left(< \right)$ XLII
 c. XXXVI $\left(< \right)$ XLIV d. XLIV $\left(> \right)$ XLII
 e. XLIX $\left(> \right)$ XL f. XIX $\left(< \right)$ XXI

5. Fill in the box with >, < or = :

- Ans.** a. $45 + 4$ $\left(> \right)$ XVIII b. XXXI $\left(< \right)$ $35 + 6$
 c. $25 - 5$ $\left(> \right)$ $XXX - XXV$ d. XI $\left(< \right)$ $27 - 3$
 e. 51 $\left(> \right)$ XXVI f. 50 $\left(= \right)$ L
 g. XLIV $\left(< \right)$ 46 h. XLVI $\left(< \right)$ 49
 i. $XIX + XXX$ $\left(< \right)$ 50 j. 44 $\left(< \right)$ XLV

6. In each of the following, write the Roman Numerals in Hindu-Arabic Notation and then add them. Write the answer in Roman Numeral :

- Ans.** a. XLVIII and II = $48 + 2 = 50 = L$ b. XLIV and IV = $44 + 4 = 48 = XLVIII$
 c. XXXVII and IX = $37 + 9 = 46 = XLVI$ d. XI and XXXVI = $11 + 36 = 47 = XLVII$
 e. XL and IX = $40 + 9 = 49 = XLIX$ f. XLII and V = $42 + 5 = XLVII$

7. Write the answer in Roman Numerals :

- Ans.** a. $XLI - XI = 41 - 11 = 30 = XXX$ b. $XLV - XL = 45 - 15 = 30 = XXX$
 c. $L - XL = 50 - 40 = 10 = X$ d. $XXX - XXIV = 30 - 24 = 6 = VI$

8. One correct Roman Numerals is given in each of the following pairs. Write the correct numerals :

- Ans.** a. XXXI, XLIV = **XLIV** b. XXIX, XXXIV = **XXXIV**
 c. XIX, XL = **XL** d. XXX, XIX = **XXX**
 e. W, X = **X**

9. Arrange the following numbers in Roman Numerals in ascending order :

- Ans.** a. XXX, XXXIII, XXXV, XXXVI, XXXIV = **XXX < XXXIII < XXXIV < XXXV < XXXVI**
 b. XLII, XLI, XLV, XLIX, XXX = **XXX < XLI < XLII < XLV < XLIX**
 c. XIII, XVI, XV, XVII, XX = **XIII < XV < XVI < XVII < XX**
 d. XL, XLI, XLV, XLVI, XLII = **XL < XLI < XLII < XLV < XLVI**
 e. XLI, XXI, XLV, XXXI = **XXI < XXXI < XLI < XLV**
 f. XXIII, XLIX, XXXII, XLII, XLVI = **XXIII < XXXII < XLII < XLVI < XLIA**
 g. III, X, IV, VIII, V = **III < IV < V < VIII < X**
 h. XXII, XXV, XIX, XXI, XX = **XIX < XX < XXI < XXII < XXV**

10. Arrange the following numbers in Roman Numerals in descending order :

- Ans.** a. XXX, XXXIII, XXXV, XXXVI, XXXIV = **XXXVI > XXXV > XXXIV > XXXIII > XXX**
 b. XL, XLI, XLV, XLVI, XLII = **XLVI > XLV > XLII > XLI > XL**
 c. XIII, XVI, XV, XVII, XX = **XX > XVII > XVI > XV > XIII**

- d. XLII, XLI, XLV, XLIX, XXX = XLIX > XLV > XLII > XLI > XXX
- e. III, X, IV, VIII, V = X > VIII > V > IV > III
- f. III, XLVIII, XXXIII, XLIV, XLVII = XLVIII > XLVII > XLIV > XXXIII > III
- g. XXIV, XXXV, XXXIV, XLII, XXXVI = XLII > XXXVI > XXXV > XXXIV > XXIV
- h. XXII, XXV, XIX, XXI, XX = XXV > XXII > XXI > XX > XIX

MCQs

Tick (✓) the correct option :

- Roman numeral I can be subtracted only from V and _____.
a. X
- 99 is the same as :
c. XCIX
- XIX + XXX =
b. XLIX
- XL - ? = XXIX
c. XI



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Fill in the boxes with Roman numerals.

	42	43	44	45	46	47	48	49	50
XLI	XLII	XLIII	XLIV	XLV	LXVI	LXVII	XLVIII	XLIX	L
	52	53	54	55	56	57	58	59	60
LI	LII	LIII	LIV	LV	LVI	LVII	LVIII	LIX	LX
	62	63	64	65	66	67	68	69	70
LXI	LXII	LXIII	LXIV	LXV	LXVI	LXVII	LXVIII	LXIX	LXX
	72	73	74	75	76	77	78	79	80
LXXI	LXXII	LXXIII	LXXIV	LXXV	LXXVI	LXXVII	LXXVIII	LXXIX	LXXX
	82	83	84	85	86	87	88	89	90
LXXXI	LXXXII	LXXXIII	LXXXIV	LXXXV	LXXXVI	LXXXVII	LXXXVIII	LXXXIX	XC
	92	93	94	95	96	97	98	99	100
XCI	XCII	XCIII	XCIV	XCV	XCVI	XCVII	XCVIII	XCIX	C

Exercise 3.1

1. Write in the short form :

- Ans. a. $40000 + 2000 + 600 + 90 + 2 = 42,692$
 b. $700000 + 50000 + 3000 + 100 + 70 + 5 = 7,53,175$
 c. $3000000 + 600000 + 20000 + 8000 + 400 + 20 + 1 = 36,28,421$
 d. $20000000 + 4000000 + 800000 + 70000 + 3000 + 400 + 50 + 6 = 2,48,73,456$
 e. $40000000 + 5000000 + 700000 + 30000 + 0 + 900 + 60 + 8 = 4,57,30,968$

2. Write in the expanded form :

- Ans. a. $67,452 = 60000 + 7000 + 400 + 50 + 2$
 b. $7,84,295 = 700000 + 80000 + 4000 + 200 + 90 + 5$
 c. $25,79,872 = 2000000 + 500000 + 70000 + 9000 + 800 + 70 + 2$
 d. $4,63,48,514 = 40000000 + 6000000 + 300000 + 40000 + 8000 + 500 + 10 + 4$
 e. $32,00,000 = 30000000 + 2000000$

3. Write in figures :

Ans. a. Fifty thousand six hundred and twenty-seven

TC	C	TL	L	TTh	Th	H	T	O
				5	0	6	2	7

b. Two lakh thirty-six thousand two hundred and ninety-four

TC	C	TL	L	TTh	Th	H	T	O
		2		3	6	2	9	4

c. Thirty-four lakh nineteen thousand five hundred and forty-five

TC	C	TL	L	TTh	Th	H	T	O
		3	4	1	9	5	4	5

d. Seven crore

TC	C	TL	L	TTh	Th	H	T	O
	7	0	0	0	0	0	0	0

e. Three crore ninety-one lakh fifty-two thousand one hundred and eighteen

TC	C	TL	L	TTh	Th	H	T	O
	3	9	1	5	2	1	1	8

f. Eleven lakh thirteen thousand and fourteen

TC	C	TL	L	TTh	Th	H	T	O
		1	1	1	3	0	1	4

g. Seventy-nine lakh eight thousand three hundred and one

TC	C	TL	L	TTh	Th	H	T	O
		7	9	0	8	3	0	1

4. Write in figures :

Ans. a. Thirty-seven thousand four hundred and fifty-eight

37,458

b. Ninety-three thousand two hundred

93,200

c. Fifty-two thousand and thirty-five

52,035

d. Two lakh forty-one thousand eight hundred and nine

2,41,809

e. Seventy-four lakh fifty-three thousand five hundred and twenty-one

74,53,521

f. One crore twenty-three lakh forty-five thousand six hundred and seventy-eight

1,23,45,678

5. Write in words :

- Ans.** a. 12,000 : **Twelve thousand.**
b. 37,869 : **Thirty-seven thousand eight hundred sixty-nine.**
c. 98,704 : **Ninety-eight thousand seven hundred four.**
d. 64,005 : **Sixty-four thousand and five.**
e. 70,101 : **Seventy thousand one hundred one.**
f. 4,00,000 : **Four lakh.**
g. 5,43,210 : **Five lakh forty-three thousand two hundred ten.**
h. 26,08,000 : **Twenty-six lakh and eight thousand.**
i. 85,47,927 : **Eighty-five lakh forty-seven thousand nine hundred twenty-seven.**

6. Rewrite the numbers with commas separating the periods :

- Ans.** a. 432157 = **4,32,157** b. 7525125 = **75,25,125**
c. 29843 = **29,843** d. 892000 = **8,92,000**
e. 111111 = **1,11,111** f. 23750496 = **2,37,50,496**
g. 9876543 = **98,76,543** h. 57020931 = **5,70,20,931**
i. 3569451 = **35,69,451**

7. Write the consecutive numbers that come after :

- Ans.** a. 63,255 = **63,256 63,257 63,258 63,259 63,260**
63,261
b. 51,996 = **51,997 51,998 51,999 52,000 52,001**
52,002
c. 1,12,732 = **1,12,733 1,12,734 1,12,735 1,12,736 1,12,737**
1,12,738
d. 19,20,897 = **19,20,898 19,20,899 19,20,900 19,20,901 19,20,902**
19,20,903
e. 64,32,169 = **64,32,170 64,32,171 64,32,172 64,32,173 64,32,174**
64,32,175

8. Write the predecessor (the number just before) :

- Ans.** a. **52,999** 53,000 b. **72,685** 72,686
c. **64,299** 64,300 d. **1,87,529** 1,87,530
e. **5,93,003** 5,93,004 f. **16,27,831** 16,27,832
g. **37,08,999** 37,09,000 h. **46,99,999** 47,00,000

9. Write the successor (the number just after) :

- Ans.** a. 19,999 **20,000** b. 15,099 **15,100**
c. 55,547 **55,548** d. 32,782 **32,783**
e. 80,999 **81,000** f. 1,71,633 **1,71,634**
g. 4,56,875 **4,56,876** h. 6,99,999 **7,00,000**

10. Write the number between :

- Ans.** a. 9999 **10,000** 10001 b. 12565 **12,566** 12567
c. 35800 **35,801** 35802 d. 57999 **58,000** 58001
e. 48634 **48,635** 48636 f. 999998 **9,99,999** 1000000
g. 232400 **2,32,401** 232402 h. 637453 **6,37,454** 637455

5. Write in ascending order :

- | | | | | | |
|----|----------------|----------------|----------------|-----------------|-----------------|
| a. | 52572 | 45678 | 334571 | 33795 | 237691 |
| | 33795 | 45678 | 52572 | 237691 | 334571 |
| b. | 580900 | 590800 | 6353412 | 7249147 | 6448160 |
| | 580900 | 590800 | 6353412 | 6448160 | 7249147 |
| c. | 39360 | 2752918 | 15045369 | 2172603 | 12336408 |
| | 39360 | 2172603 | 2752918 | 12336408 | 15045369 |
| d. | 7800000 | 79000 | 9999 | 500900 | 9000500 |
| | 9999 | 79000 | 500900 | 780000 | 9000500 |
| e. | 11224480 | 4856640 | 71421283 | 6054426 | 2530355 |
| | 2530355 | 4856640 | 6054426 | 11224480 | 71421283 |

6. Write in descending order :

- | | | | | | |
|----|-----------------|----------------|----------------|---------------|--------------|
| a. | 9180 | 18270 | 3645549 | 6372810 | 1827930 |
| | 6372810 | 3645549 | 1827930 | 18270 | 9180 |
| b. | 15000 | 26000 | 9000 | 81000000 | 17000 |
| | 81000000 | 26000 | 17000 | 15000 | 9000 |
| c. | 3236400 | 812160 | 40400 | 2024284 | 1620240 |
| | 3236400 | 2024284 | 1620240 | 812160 | 40400 |
| d. | 555 | 15205 | 5100 | 2530350 | 54045404 |
| | 54045404 | 2530350 | 15205 | 5100 | 555 |

7. Make the greatest and the smallest numbers using all the given digits :

- | | | | | | | | | G. N. | S. N. |
|----|---|---|---|---|---|---|---|--------------------|--------------------|
| a. | 3 | 1 | 7 | 5 | 9 | | | 97,531 | 13,579 |
| b. | 6 | 8 | 2 | 0 | 4 | | | 86,420 | 20,468 |
| c. | 5 | 8 | 7 | 9 | 3 | 2 | | 9,87,532 | 2,35,789 |
| d. | 7 | 9 | 5 | 7 | 0 | 6 | 2 | 97,76,520 | 20,56,779 |
| e. | 4 | 2 | 0 | 3 | 1 | 0 | 5 | 8,54,32,100 | 1,00,23,458 |

MCQs

Tick (✓) the correct option :

- Seven lakh sixty is written as :
a. 7,00,060
- Place value of 6 in 9,86,100 is :
b. 6000
- Largest six digit number is :
c. 9,99,999
- Largest 7-digit number is :
a. 99,99,999
- Which number is according to international number system :
b. 896,560



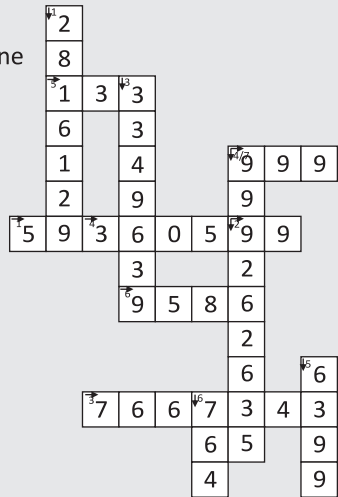
Solve the following crossword puzzle using the clues given below :

Across : →

1. Fifty-nine lakh thirty-six thousand fifty-nine
2. Greatest 2-digit number
3. Predecessor of 76,67,344
4. Predecessor of 3,60,600
5. Seven ones subtracted from 20 tens.
6. $9000 + 500 + 80 + 6$
7. Greatest 3-digit number

Down : ↑

1. Successor of 28,16,128
2. Ten lakhs more than 82,62,635
3. 1 lakh more than 32,49,639
4. Subtract 31 ones from 100 tens
5. Predecessor of 6400
6. 235 less than the least 4-digit number



4

Addition

Exercise 4.1

1. Add the following :

a.

$$\begin{array}{r} 28636 \\ + 41132 \\ \hline 69768 \end{array}$$

b.

$$\begin{array}{r} 43245 \\ + 95432 \\ \hline 138677 \end{array}$$

c.

$$\begin{array}{r} 34875 \\ + 72112 \\ \hline 106987 \end{array}$$

d.

$$\begin{array}{r} 72145 \\ + 32453 \\ \hline 104598 \end{array}$$

2. Add :

a. 20025, 12314, 100, 2000

$$\begin{array}{r} 20025 \\ 12314 \\ 100 \\ + 2000 \\ \hline 34439 \end{array}$$

b. 31111, 32425, 42031

$$\begin{array}{r} 31111 \\ 32425 \\ + 42031 \\ \hline 105567 \end{array}$$

c. 12436, 24320, 101423

$$\begin{array}{r} 12436 \\ 24320 \\ + 101423 \\ \hline 138179 \end{array}$$

d. 640323, 21431, 210003, 10020

$$\begin{array}{r} 640323 \\ 21431 \\ 210003 \\ + 10020 \\ \hline 881777 \end{array}$$

Exercise 4.2

1. Add the following :

$$\begin{array}{r} 82723 \\ + 45894 \\ \hline 128617 \end{array}$$

$$\begin{array}{r} 94235 \\ + 48789 \\ \hline 143024 \end{array}$$

$$\begin{array}{r} 20463 \\ + 28886 \\ \hline 49349 \end{array}$$

$$\begin{array}{r} 87953 \\ + 88457 \\ \hline 176410 \end{array}$$

2. Add :

a. $84654, 78463, 2844, 129$

$$\begin{array}{r} 84654 \\ 78463 \\ + 2844 \\ + 129 \\ \hline 166090 \end{array}$$

b. $505048, 6432, 28455, 374$

$$\begin{array}{r} 505048 \\ 6432 \\ + 28455 \\ + 374 \\ \hline 540309 \end{array}$$

c. $64329, 42847, 389248, 4264$

$$\begin{array}{r} 64329 \\ 42847 \\ + 389248 \\ + 4264 \\ \hline 500688 \end{array}$$

3. Find the sum of the following :

Ans. a. The greatest 4-digit number = 9999
And, the smallest 5-digit number = 10,000
So, their sum = $9999 + 10000$
= 19,999.

$$\begin{array}{r} 9999 \\ + 10000 \\ \hline 19999 \end{array}$$

b. The greatest 5-digit number = 99,999
And, the smallest 4-digit number = 1000
So, their sum = $99,999 + 1000$
= 100,999.

$$\begin{array}{r} 99999 \\ + 1000 \\ \hline 100999 \end{array}$$

c. The largest number formed by using digits 4, 2, 3, 9 and 8 = 98,432
And, the smallest number formed by using digits 4, 2, 3, 9 and 8 = 23489
So, their sum = $98432 + 23489$
= 1,21,921.

$$\begin{array}{r} 98432 \\ + 23489 \\ \hline 121921 \end{array}$$

4. Which number is :

Ans. a. 649 more than 48625?
Hence, 49274 is 649 more than 48625.

$$\begin{array}{r} 649 \\ + 48625 \\ \hline 49274 \end{array}$$

b. 25000 more than 55226?
Hence, 80226 is 25000 more than 55226.

$$\begin{array}{r} 25000 \\ + 55226 \\ \hline 80226 \end{array}$$

- c. 63845 more than 32663?
Hence, 96508 is 63845 more than 32663.

$$\begin{array}{r} 63845 \\ + 32663 \\ \hline 96508 \end{array}$$

Exercise-4.3

1. Fill in the blanks using the properties of addition :

- Ans. a. $32,387 + 22,485 = 22,485 + \mathbf{32,387}$
 b. $46,474 + 72,985 + 32 = \mathbf{32} + 72,985 + 46,474$
 c. $78,726 + 0 = \mathbf{78,726}$
 d. $89,324 + \mathbf{92,087} = 92,087 + 89,324$
 e. $39,887 + 92,426 = \mathbf{92,426} + 39,887$
 f. $0 + 94,679 = \mathbf{94,679}$
 g. $78,729 + \mathbf{0} = 78,729$
 h. $42,569 + 23,485 + 92,648 = \mathbf{92,648} + 42,569 + 23,485$
 i. $94,007 + \mathbf{24,873} + 11,467 = 24,873 + 94,007 + 11,467$
 j. $\mathbf{30,005} + 46,456 = 46,456 + 30,005$

2. Word Problems :

- Ans. a. Voters secured by first candidate = 56,248
 Voters secured by second candidate = 99,268
 And, voter secured by third candidate = 44,229
 So, total number of votes polled in the election
 $= 56,248 + 99,268 + 44,229$
 $= 1,99,745$ votes.

$$\begin{array}{r} 56248 \\ 99268 \\ + 44229 \\ \hline 199745 \end{array}$$

- b. Number of men in the city = 1,07,648
 Number of women in the city = 1,00,002
 And, number of children in the city = 88,004
 So, the total population of the city
 $= 1,07,648 + 1,00,002 + 88,004 = 2,95,654$

$$\begin{array}{r} 107648 \\ 100002 \\ + 88004 \\ \hline 295654 \end{array}$$

- c. Number of deer in the forest = 48,281
 Number of rabbits in the forest = 32,642
 And, number of other animals in the forest = 38,242
 So, total number of animals in the forest
 $= 48,281 + 32,642 = 38,242$
 $= 1,19,165$ animals.

$$\begin{array}{r} 48281 \\ 32642 \\ + 38242 \\ \hline 119165 \end{array}$$

- d. The difference of two numbers = 24,896
 And, the greater number = 62,842
 Thus, the smaller number = $62,842 - 24,896 = 37,946$

$$\begin{array}{r} 62842 \\ - 24896 \\ \hline 37946 \end{array}$$

- e. The cost of a colour television = ₹ 15,050
 The cost of a scooter = ₹ 22,140
 And, the cost of a CD player = ₹ 4,990
 Thus, the total cost of these items
 $= ₹ 15,050 + ₹ 22,140 + ₹ 4,990$
 $= ₹ 42,180$

$$\begin{array}{r} 15050 \\ 22140 \\ + 4990 \\ \hline 42180 \end{array}$$

Hence, ₹42,180 are required to purchase all these three items.

- f. Money collected by first school = ₹ 46,299
 Money collected by second school = ₹ 96,400
 And, Money collected by third school = ₹ 85,555
 So, total money collected by three schools altogether
 = ₹ 46,299 + ₹ 96,400 + ₹ 85,555
 = ₹ 2,28,254

$$\begin{array}{r} 46299 \\ 96400 \\ + 85555 \\ \hline 228254 \end{array}$$

- g. Cost price of the house = ₹ 6,85,800
 Money spent on curtains and finishing = ₹ 16,450
 And, money spent on wooden work = ₹ 99,640
 So, total money spend by Mr Verma altogether
 = ₹ 6,85,800 + ₹ 16,450 + ₹ 99,640
 = ₹ 8,01,890

$$\begin{array}{r} 685800 \\ 16450 \\ + 99640 \\ \hline 801890 \end{array}$$

Exercise 4.4

Make an estimate of each of the following sums and compare your estimated answer with the actual sum :

- | | Estimated sum | Actual sum |
|--|---|---|
| Ans. a. $6927 + 613 + 9126 + 103 + 68$ | | |
| Estimated Sum | $\begin{array}{r} 6930 \\ 610 \\ 9130 \\ 100 \\ + 70 \\ \hline 16840 \end{array}$ | $\begin{array}{r} 6927 \\ 613 \\ 9126 \\ 103 \\ + 68 \\ \hline 16837 \end{array}$ |
| = $6930 + 610 + 9130 + 100 + 70$ | | |
| = 16840 | | |
| And, Actual Sum | | |
| = $6927 + 613 + 9126 + 103 + 68$ | | |
| = 16837 | | |
| b. $1762 + 34211 + 5824 + 23902$ | | |
| Estimated Sum | $\begin{array}{r} 1760 \\ 34210 \\ 5820 \\ + 23900 \\ \hline 65690 \end{array}$ | $\begin{array}{r} 1762 \\ 34211 \\ 5824 \\ + 23902 \\ \hline 65699 \end{array}$ |
| = $1760 + 34210 + 5820 + 23900$ | | |
| = 65690 | | |
| And, Actual Sum | | |
| = $1762 + 34211 + 5824 + 23902$ | | |
| = 65699 | | |
| c. $9187 + 618 + 6138 + 983 + 67$ | | |
| Estimated Sum | $\begin{array}{r} 9190 \\ 620 \\ 6140 \\ 980 \\ + 70 \\ \hline 17000 \end{array}$ | $\begin{array}{r} 9187 \\ 618 \\ 6138 \\ 983 \\ + 61 \\ \hline 16993 \end{array}$ |
| = $9190 + 620 + 6140 + 980 + 70$ | | |
| = 17,000 | | |
| And, Actual Sum | | |
| = $9187 + 618 + 6138 + 983 + 67$ | | |
| = 16,993 | | |
| d. $9298 + 90150$ | | |
| Estimated Sum | $\begin{array}{r} 9300 \\ + 90150 \\ \hline 99450 \end{array}$ | $\begin{array}{r} 9298 \\ + 90150 \\ \hline 99448 \end{array}$ |
| = $9,300 + 90,150$ | | |
| = 99,450 | | |
| And, Actual Sum | | |
| | | |

$$= 9298 + 90150$$

$$= \mathbf{99,448}$$

e. $3252 + 6135 + 309$

Estimated Sum

$$= 3250 + 6140 + 310$$

$$= \mathbf{9700}$$

And, Actual Sum

$$= 3252 + 6135 + 309$$

$$= \mathbf{9696}$$

3	2	5	0
6	1	4	0
+	3	1	0
9	7	0	0

3	2	5	2
6	1	3	5
+	3	0	9
9	6	9	6

MCQs

Tick (✓) the correct option :

- The sum of the greatest 5-digit number and smallest 6-digit number is :
c. 199999
- $22333 + 100000 = 100000 + \underline{\hspace{2cm}}$
a. 22333
- Sum of seventy-five thousand and 80 thousand is :
b. 155000
- $63956 + 83456 = \underline{\hspace{2cm}}$.
a. 147412
- $182879 + 0 = \underline{\hspace{2cm}}$
b. 182879



NEP Life Skills

Solve the crossword.

a	8	3	b	4	5	7			c	9
				2			d	5	0	9
e	6	2	8	7	6					9
	8		f	5	3	4	g	7	6	9
	7							7		9
h	4	5	6	4	5	7				
	7					6	7			
	6			i	7	4	7	8	0	

Across (→)

- $83457 + 0$
- $1 + 508$
- $62776 + 100$
- $534768 + 1$
- $455457 + 1000$
- $74770 + 10$

Down (↓)

- $4284 + 1$
- successor of 99998
- $587476 + 100000$
- $67777 + 10000$
- $32547 + 564 = \underline{\hspace{2cm}} + 32547$

Exercise-5.1

1. Subtract the following :

a. $\begin{array}{r} 48276 \\ - 33165 \\ \hline 15111 \end{array}$	b. $\begin{array}{r} 63043 \\ - 22021 \\ \hline 41022 \end{array}$	c. $\begin{array}{r} 98644 \\ - 23423 \\ \hline 75221 \end{array}$	d. $\begin{array}{r} 87639 \\ - 25428 \\ \hline 62211 \end{array}$
--	--	--	--

2. Work out the following sums :

Ans. a. Subtract 36,400 from 96,420. b. Subtract 75,229 from 86,439.

$$\begin{array}{r} 96420 \\ - 36400 \\ \hline 60020 \end{array}$$

$$\begin{array}{r} 86439 \\ - 75229 \\ \hline 11210 \end{array}$$

c. Subtract 4,25,008 from 6,48,428. d. Subtract 2,40,499 from 9,80,699.

$$\begin{array}{r} 648428 \\ - 425008 \\ \hline 223420 \end{array}$$

$$\begin{array}{r} 980699 \\ - 240499 \\ \hline 740200 \end{array}$$

e. Difference between 42,042 and 92,963. f. Difference between 8,48,526 and 4,26,114.

$$\begin{array}{r} 92963 \\ - 42042 \\ \hline 50921 \end{array}$$

$$\begin{array}{r} 848526 \\ - 426114 \\ \hline 422412 \end{array}$$

So, the difference between 42,042 and 92,963 is 50,921.

So, the difference between 8,48,526 and 4,26,114 is 4,22,412.

g. The largest 5-digit number = 99,999

And, the smallest 5-digit number = 10,000

\therefore Their difference = 99,999 - 10,000 = 89,999

So, the difference between the largest 5-digit number and the smallest 5-digit number is 89,999.

$$\begin{array}{r} 99999 \\ - 10000 \\ \hline 89999 \end{array}$$

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

and, the smallest 4-digit number = 1,000

\therefore Their difference = 9,99,999 - 1,000 = 9,98,999

So, the difference between the largest 6-digit number and the smallest 4-digit number is 9,98,999.

$$\begin{array}{r} 999999 \\ - 1000 \\ \hline 998999 \end{array}$$

Exercise-5.2

1. Subtract the following :

a.

TTh	Th	H	T	O
4	18	8	14	10
8	8	8	8	8
-1	9	4	7	5
3	9	4	7	5

b.

TTh	Th	H	T	O
6	12		8	18
7	2	4	8	8
-4	5	2	8	9
2	7	2	0	9

c.

TTh	Th	H	T	O
3	10	10	4	12
4	1	0	8	2
-2	3	1	4	7
1	7	9	0	5

d.

TTh	Th	H	T	O
7	11	12	14	
8	2	3	4	5
-6	3	4	8	0
1	8	8	6	5

e.

TTh	Th	H	T	O
1	12	10		
2	3	0	2	8
-1	4	6	1	7
0	8	4	1	1

f.

TTh	Th	H	T	O
	7	11	13	
1	8	2	3	6
-1	1	5	8	4
0	6	6	5	2

2. Find the difference between :

a. 51690 and 38508

TTh	Th	H	T	O
4	11		8	10
8	1	6	8	8
-3	8	5	0	8
1	3	1	8	2

b. 24170 and 13253

TTh	Th	H	T	O
	3	11	6	10
2	4	1	7	8
-1	3	2	5	3
1	0	9	1	7

c. 11098 and 19276

TTh	Th	H	T	O
		1	16	16
1	9	2	7	8
-1	1	0	9	8
0	8	1	7	8

Exercise-5.3

1. Fill in the blanks :

Ans. a. $87953 - 10 = 87943$

b. $82434 - 100 = 82334$

c. $28005 - 0 = 28005$

d. $65437 - 1000 = 64437$

e. $72567 - 100 = 72467$

f. $63972 - 0 = 63972$

g. $32568 - 1000 = 31568$

h. $92145 - 100 = 92045$

2. Word Problems :

Ans. a. Sugar stored in godown before Deepawali = 986425 kg

And, sugar sold at Deepawali = 698456 kg

So, the sugar was left in the godown

= $986425 \text{ kg} - 698456 \text{ kg} = 287969 \text{ kg}$

8	17	15	13	11	15
8	8	4	2	8	kg
-6	9	8	4	5	6
2	8	7	9	6	9

b. The population of city before ten years = 248399

And population of city after ten years = 864239

∴ Increment in population = $864239 - 248399$

= **615840**

Hence, the population of the city was increased

615840 in ten years.

5	13	11	13
8	6	4	2
-2	4	8	3
6	1	5	8

c. Number of candidates appeared in an examination

= 798642

And, number of candidates passed = 428999

∴ Number of candidates failed = $798642 - 428999$

= 369643

8	17	15	13	12
7	8	6	4	2
-4	2	8	9	9
3	6	9	6	4

Hence, 369643 candidates passed in the examination.

d. The sum of two numbers = 79,832

And, the first number = 38,642

Thus, the other number = $79,832 - 38,642$
 $= 41,190$

$$\begin{array}{r} 7 \quad 13 \\ 79,832 \\ - 38,642 \\ \hline 41,190 \end{array}$$

e. The population of a town = 56469

And, the population of other town = 64890

Clearly show that, the population of second town is more than the first town.

\therefore More population of second town = $64890 - 56469$
 $= 8421$

$$\begin{array}{r} 5 \quad 14 \quad 8 \quad 10 \\ 64,890 \\ - 56,469 \\ \hline 08,421 \end{array}$$

Hence, the population of the second town is 8421 more than the population of first town.

f. The population of the city = 876423

And, the number of men = 379642

\therefore Number of women and children = $876423 - 379642$
 $= 496781$

$$\begin{array}{r} 7 \quad 16 \quad 15 \quad 13 \quad 12 \\ 876,423 \\ - 379,642 \\ \hline 496,781 \end{array}$$

Hence, there are 496781 women and children in the city.

g. First candidate received votes = 246399

And, second candidate received votes = 560000

Clearly show that, second candidate is the winner.

\therefore Number of winning votes = $560000 - 246399$
 $= 313601$

$$\begin{array}{r} 5 \quad 9 \quad 9 \quad 9 \quad 10 \\ 560,000 \\ - 246,399 \\ \hline 313,601 \end{array}$$

Hence, the second candidate won by 313601 votes.

h. The total number of students appearing = 876432

And, the number of girls = 396488

\therefore Number of boys = $876432 - 396488$
 $= 479944$

$$\begin{array}{r} 7 \quad 16 \quad 15 \quad 13 \quad 12 \quad 12 \\ 876,432 \\ - 396,488 \\ \hline 479,944 \end{array}$$

Hence, there are 479944 boys in the exam.

i. Total number of trees planted in a city = 80064

And, number of trees destroyed due to lack of water = 39688

\therefore Remaining plant in the city = $80,064 - 39,688 = 40,376$

$$\begin{array}{r} 7 \quad 9 \quad 9 \quad 15 \quad 14 \\ 80,064 \\ - 39,688 \\ \hline 40,376 \end{array}$$

Hence, there are 40,376 plants left in the city.

Exercise-5.4

1. Solve using compensation :

Ans. a. $560 + 105 = (560 + 5) + (105 - 5)$
 $= 565 + 100$
 $= 665$

b. $302 + 362 = (302 - 2) + (362 + 2)$
 $= 300 + 364$
 $= 664$

c. $442 + 305 = (442 + 5) + (305 - 5)$
 $= 447 + 300$
 $= 747$

d. $198 + 232 = (198 + 2) + (232 - 2)$
 $= 200 + 230$
 $= 430$

$$\begin{aligned} \text{e. } 84 - 28 &= (84 + 2) - (28 + 2) \\ &= 86 - 30 \\ &= 56 \end{aligned}$$

$$\begin{aligned} \text{f. } 96 - 54 &= (96 - 4) - (54 - 4) \\ &= 92 - 50 \\ &= 42 \end{aligned}$$

2. Word Problems :

Ans. a. The population of a town = 89006

Number of women in the town = 32644

And, number of children in the town = 12643

$$\begin{aligned} \therefore \text{Total number of women and children} &= 32644 + 12643 \\ &= \mathbf{45287} \end{aligned}$$

Thus, the number of men = 89006 - 45287

$$= \mathbf{43719}$$

Hence, the number of men in the town is 43719.

$$\begin{array}{r} 32644 \\ + 12643 \\ \hline 45287 \\ \hline 89006 \\ - 45287 \\ \hline 43719 \end{array}$$

b. A shopkeeper had shirts in his shop = 68249

And, he sold shirts in a month = 32996

$$\begin{aligned} \therefore \text{Remaining shirt with him} &= 68249 - 32996 \\ &= \mathbf{35253} \end{aligned}$$

And, he got new shirts at the end of month = 14962

$$\begin{aligned} \text{Now, the number of shirts with him} &= 35253 + 14962 \\ &= \mathbf{50215} \end{aligned}$$

Hence, the shopkeeper has 50,215 shirts in his godown now.

$$\begin{array}{r} 68249 \\ - 32996 \\ \hline 35253 \\ + 14962 \\ \hline 50215 \end{array}$$

c. 87200 - [Sum of 15862 and 46824]

$$= 87200 - [15862 + 46824]$$

$$= 87200 - 62686$$

$$= \mathbf{24,514}$$

$$\begin{array}{r} 15862 \\ + 46824 \\ \hline 62686 \end{array}$$

$$\begin{array}{r} 87200 \\ - 62686 \\ \hline 24514 \end{array}$$

d. Cost of a computer = ₹ 25250

And, cost of a television = ₹ 9995

$$\begin{aligned} \therefore \text{Total cost of a computer and a television} \\ &= ₹ 25250 + ₹ 9995 \\ &= ₹ \mathbf{35245} \end{aligned}$$

Sunita gave money to the shopkeeper = ₹ 36000

$$\begin{aligned} \therefore \text{Remaining money} &= ₹ 36000 - ₹ 35245 \\ &= ₹ \mathbf{755} \end{aligned}$$

Hence, the shopkeeper will return ₹ 755 to Sunita.

$$\begin{array}{r} ₹ 25250 \\ + ₹ 9995 \\ \hline ₹ 35245 \end{array}$$

$$\begin{array}{r} ₹ 36000 \\ - ₹ 35245 \\ \hline ₹ 00755 \end{array}$$

e. Cost of the motorcycle = ₹ 28440

Cost of repairing and painting = ₹ 5840

$$\begin{aligned} \therefore \text{Total money spent by Yadav} &= ₹ 28440 + ₹ 5840 \\ &= ₹ \mathbf{34280} \end{aligned}$$

$$\begin{array}{r} ₹ 28440 \\ + ₹ 5840 \\ \hline ₹ 34280 \end{array}$$

Selling price of the motorcycle = ₹ 36050

Gain = Selling price – cost price

= ₹ 36060 – ₹ 34280

= ₹ **1770**

Hence, Yadav get a gain of ₹ 1770.

5 9 15
₹ ~~36050~~
– ₹ 34280
₹ 01770

MCQs

Tick (✓) the correct option :

1. $4675 - 575 =$ _____
a. 4100
2. Difference of largest 3-digit number and smallest 3-digit number is :
a. 899
3. $4796 - 100 =$ _____ :
b. 4696
4. $45 + 55 = 100 +$ _____
c. 0
5. $445 - 45 = 30 +$ _____
c. 370



NEP SDGs for Qualitative Education

Do it yourself.

6

Multiplication

Exercise 6.1

Multiply :

a. 91×38

$$\begin{array}{r} 91 \\ \times 38 \\ \hline 728 \\ 2730 \\ \hline 3458 \end{array}$$

b. 73×45

$$\begin{array}{r} 73 \\ \times 45 \\ \hline 365 \\ 2920 \\ \hline 3285 \end{array}$$

c. 46×88

$$\begin{array}{r} 46 \\ \times 88 \\ \hline 368 \\ 3680 \\ \hline 4048 \end{array}$$

d. 19×59

$$\begin{array}{r} 19 \\ \times 59 \\ \hline 171 \\ 950 \\ \hline 1121 \end{array}$$

e. 55×86

$$\begin{array}{r} 55 \\ \times 86 \\ \hline 330 \\ 4300 \\ \hline 4730 \end{array}$$

f. 36×39

$$\begin{array}{r} 36 \\ \times 39 \\ \hline 324 \\ 1080 \\ \hline 1404 \end{array}$$

Exercise 6.2

Multiply the following :

a.
$$\begin{array}{r} 235 \\ \times 19 \\ \hline 2115 \\ 2350 \\ \hline 4465 \end{array}$$

b.
$$\begin{array}{r} 187 \\ \times 94 \\ \hline 748 \\ 16830 \\ \hline 17578 \end{array}$$

c.
$$\begin{array}{r} 999 \\ \times 76 \\ \hline 5994 \\ 69930 \\ \hline 75924 \end{array}$$

d.
$$\begin{array}{r} 274 \\ \times 68 \\ \hline 2192 \\ 16440 \\ \hline 18632 \end{array}$$

e.
$$\begin{array}{r} 386 \\ \times 93 \\ \hline 1158 \\ 34740 \\ \hline 35898 \end{array}$$

f.
$$\begin{array}{r} 488 \\ \times 64 \\ \hline 1952 \\ 29280 \\ \hline 31232 \end{array}$$

Exercise 6.3

Multiply :

a.
$$\begin{array}{r} 3987 \\ \times 36 \\ \hline 23922 \\ 119610 \\ \hline 143532 \end{array}$$

b.
$$\begin{array}{r} 2487 \\ \times 46 \\ \hline 14922 \\ 99480 \\ \hline 114402 \end{array}$$

c.
$$\begin{array}{r} 9624 \\ \times 95 \\ \hline 48120 \\ 577440 \\ \hline 625560 \end{array}$$

d.
$$\begin{array}{r} 8678 \\ \times 93 \\ \hline 26034 \\ 781020 \\ \hline 807054 \end{array}$$

e.
$$\begin{array}{r} 9204 \\ \times 48 \\ \hline 73632 \\ 368160 \\ \hline 441792 \end{array}$$

f.
$$\begin{array}{r} 3833 \\ \times 26 \\ \hline 22998 \\ 76660 \\ \hline 99658 \end{array}$$

g.
$$\begin{array}{r} 7248 \\ \times 19 \\ \hline 65232 \\ 72480 \\ \hline 137712 \end{array}$$

h.
$$\begin{array}{r} 9632 \\ \times 12 \\ \hline 19264 \\ 96320 \\ \hline 115584 \end{array}$$

Exercise 6.4

Multiply :

a.
$$\begin{array}{r} 384 \\ \times 216 \\ \hline 2304 \\ 3840 \\ 76800 \\ \hline 82944 \end{array}$$

b.
$$\begin{array}{r} 148 \\ \times 324 \\ \hline 592 \\ 2960 \\ 44400 \\ \hline 47952 \end{array}$$

c.
$$\begin{array}{r} 486 \\ \times 396 \\ \hline 2916 \\ 43740 \\ 145800 \\ \hline 192456 \end{array}$$

d.
$$\begin{array}{r} 248 \\ \times 628 \\ \hline 1984 \\ 4960 \\ 148800 \\ \hline 155744 \end{array}$$

e.
$$\begin{array}{r} 640 \\ \times 567 \\ \hline 4480 \\ 38400 \\ 320000 \\ \hline 362880 \end{array}$$

f.
$$\begin{array}{r} 389 \\ \times 642 \\ \hline 778 \\ 15560 \\ 233400 \\ \hline 249738 \end{array}$$

g.
$$\begin{array}{r} 576 \\ \times 278 \\ \hline 4608 \\ 40320 \\ 115200 \\ \hline 160128 \end{array}$$

h.
$$\begin{array}{r} 963 \\ \times 843 \\ \hline 2889 \\ 38520 \\ 770400 \\ \hline 811809 \end{array}$$

Exercise 6.5

Find the product in the easier way (by splitting) :

- Ans. a. $9 \times 85 = 9 \times (80 + 5)$
 $= 720 + 45$
 $= \mathbf{765}$
- b. $7 \times 210 = 7 \times (200 + 10)$
 $= 1400 + 70$
 $= \mathbf{1470}$
- c. $8 \times 105 = 8 \times (100 + 5)$
 $= 800 + 40$
 $= \mathbf{840}$
- d. $3 \times 108 = 3 \times (100 + 8)$
 $= 300 + 24$
 $= \mathbf{324}$
- e. $7 \times 312 = 7 \times (300 + 10 + 2)$
 $= 2100 + 70 + 14$
 $= \mathbf{2184}$
- f. $5 \times 209 = 5 \times (200 + 9)$
 $= 1000 + 45$
 $= \mathbf{1045}$
- g. $4 \times 180 = 4 \times (100 + 80)$
 $= 400 + 320$
 $= \mathbf{720}$
- h. $9 \times 405 = 9 \times (400 + 5)$
 $= 3600 + 45$
 $= \mathbf{3645}$
- i. $6 \times 515 = 6 \times (500 + 10 + 5)$
 $= 3000 + 60 + 30$
 $= \mathbf{3090}$
- j. $8 \times 450 = 8 \times (400 + 50)$
 $= 3200 + 400$
 $= \mathbf{3600}$
- k. $6 \times 507 = 6 \times (500 + 7)$
 $= 3000 + 42$
 $= \mathbf{3042}$
- l. $4 \times 712 = 4 \times (700 + 10 + 2)$
 $= 2800 + 40 + 8$
 $= \mathbf{2848}$

Exercise 6.6

Multiply using expanded notation :

- Ans. a. $3775 \times 6 = (3000 + 700 + 70 + 5) \times 6$
 $= 18000 + 4200 + 420 + 30 = \mathbf{22650}$
- b. $8241 \times 5 = (8000 + 200 + 40 + 1) \times 5$
 $= 40,000 + 1000 + 200 + 5 = \mathbf{41205}$
- c. $3397 \times 2 = (3000 + 300 + 90 + 7) \times 2$
 $= 6000 + 600 + 180 + 14 = \mathbf{6794}$
- d. $4228 \times 4 = (4000 + 200 + 20 + 8) \times 4$
 $= 16000 + 800 + 80 + 32 = \mathbf{16912}$
- e. $6253 \times 4 = (6000 + 200 + 50 + 3) \times 4$
 $= 24000 + 800 + 200 + 12 = \mathbf{25012}$
- f. $9896 \times 4 = (9000 + 800 + 90 + 6) \times 4$
 $= 36000 + 3200 + 360 + 24 = \mathbf{39584}$
- g. $9268 \times 3 = (9000 + 200 + 60 + 8) \times 3$
 $= 27000 + 600 + 180 + 24 = \mathbf{27804}$
- h. $8398 \times 2 = (8000 + 300 + 90 + 8) \times 2$
 $= 16000 + 600 + 180 + 16 = \mathbf{16796}$
- i. $7794 \times 8 = (7000 + 700 + 90 + 4) \times 8$
 $= 56000 + 5600 + 720 + 32 = \mathbf{62352}$

2. Word Problems :

- Ans. a. Cost of a table = ₹ 995
 So, the cost of 684 tables = ₹ 995 × 684
 = ₹ 6,80,580

$$\begin{array}{r} 995 \\ \times 684 \\ \hline 3980 \\ 79600 \\ 597000 \\ \hline 680580 \end{array}$$

- b. An engine draws water in one hour = 9648 litres
 Water draws by engine in 9 hours = (9648 × 9) litres
 = 86,832 litres
 Hence, the engine draws 86832 litres of water in 9 hours.

$$\begin{array}{r} 9648 \\ \times 9 \\ \hline 86832 \end{array}$$

- c. Cost of a set of a uniform = ₹ 876
 So, the cost of 496 such uniform sets
 = ₹ 876 × 496
 = ₹ 4,34,496

$$\begin{array}{r} 876 \\ \times 496 \\ \hline 5256 \\ 78840 \\ 350400 \\ \hline 434496 \end{array}$$

- d. One packet contain sweets = 289
 So, 396 such packets contain sweets = 289 × 396
 = 114444
 Hence, 114444 sweets can be packed in 396 such packets.

$$\begin{array}{r} 289 \\ \times 396 \\ \hline 1734 \\ 26010 \\ 86700 \\ \hline 114444 \end{array}$$

- e. Mr John earn every month = ₹ 9600
 He earns in 1 year (i.e. 12 month) = ₹ 9600 × 12
 = ₹ 1,15,200
 Thus, he will earn in 7 years = ₹ 1,15,200 × 7
 = ₹ 8,06,400

$$\begin{array}{r} 9600 \\ \times 12 \\ \hline 19200 \\ 96000 \\ \hline 115200 \end{array}$$

$$\begin{array}{r} 115200 \\ \times 7 \\ \hline 806400 \end{array}$$

- f. Cost of one horse toy = ₹ 56
 So, the cost of 496 horse toys = ₹ 56 × 496
 = ₹ 27,776

$$\begin{array}{r} 496 \\ \times 56 \\ \hline 2976 \\ 24800 \\ \hline 27776 \end{array}$$

Hence, he purchased 496 horse toy for ₹ 27,776.

- g. The weight of a sugar bag = 240 kg
 So, the weight of 673 sugar bags = (240 × 673) kg
 = 1,61,520 kg

$$\begin{array}{r} 240 \\ \times 673 \\ \hline 720 \\ 16800 \\ 144000 \\ \hline 161520 \end{array}$$

MCQs

Tick (✓) the correct option :

- The product of 4365, 100 and 1 is :
b. 4,36,500
- In $1210 \times 70 = 84,700$ the multiplicand is :
a. 1210
- Multiplying 326 by 50, we get :
c. 16300
- The product of 1849 and 28 is :
a. 51,772
- If an almirah can hold 238 books, then 140 such almirahs can hold :
b. 33,320 books



NEP The 4Cs : Core Learning Skills

Solve the sums to crack the code to the riddle.

1

$$\begin{array}{r} 125 \\ \times 316 \\ \hline 39500 \end{array}$$

2

$$\begin{array}{r} 552 \\ \times 325 \\ \hline 179400 \end{array}$$

5

$$\begin{array}{r} 354 \\ \times 872 \\ \hline 308688 \end{array}$$

8

$$\begin{array}{r} 250 \\ \times 158 \\ \hline 39500 \end{array}$$

11

$$\begin{array}{r} 250 \\ \times 362 \\ \hline 90500 \end{array}$$

3

$$\begin{array}{r} 708 \\ \times 436 \\ \hline 308688 \end{array}$$

6

$$\begin{array}{r} 123 \\ \times 654 \\ \hline 80442 \end{array}$$

9

$$\begin{array}{r} 975 \\ \times 184 \\ \hline 179400 \end{array}$$

12

$$\begin{array}{r} 486 \\ \times 316 \\ \hline 153576 \end{array}$$

4

$$\begin{array}{r} 589 \\ \times 415 \\ \hline 244435 \end{array}$$

7

$$\begin{array}{r} 630 \\ \times 326 \\ \hline 205380 \end{array}$$

10

$$\begin{array}{r} 779 \\ \times 156 \\ \hline 121524 \end{array}$$

13

$$\begin{array}{r} 437 \\ \times 666 \\ \hline 291042 \end{array}$$

Where do Dogs
park their cars?



b 244435
i 39500
k 205380
n 179400
a 308688
r 80442
t 291042
l 90500
g 121524
o 153576

The Answer is :

i 1 n 2 a 3 b 4 a 5 r 6 k 7
i 8 n 9 g 10 l 11 o 12 t 13

Exercise-7.1

1. Divide the following :

Ans. a. $45 \div 5$

$$\begin{array}{r} 9 \\ 5 \overline{) 45} \\ \underline{-45} \\ \hline \end{array}$$

So, $45 \div 5 = 9$

b. $36 \div 2$

$$\begin{array}{r} 18 \\ 2 \overline{) 36} \\ \underline{-2} \\ \hline 16 \\ \underline{-16} \\ \hline \end{array}$$

So, $36 \div 2 = 18$

c. $49 \div 7$

$$\begin{array}{r} 7 \\ 7 \overline{) 49} \\ \underline{-49} \\ \hline \end{array}$$

So, $49 \div 7 = 7$

d. $72 \div 9$

$$\begin{array}{r} 8 \\ 9 \overline{) 72} \\ \underline{-72} \\ \hline \end{array}$$

So, $72 \div 9 = 8$

2. Divide :

Ans. a. $104 \div 4$

$$\begin{array}{r} 26 \\ 4 \overline{) 104} \\ \underline{-8} \\ \hline 24 \\ \underline{-24} \\ \hline \end{array}$$

So, $104 \div 4 = 26$

b. $195 \div 3$

$$\begin{array}{r} 65 \\ 3 \overline{) 195} \\ \underline{-18} \\ \hline 15 \\ \underline{-15} \\ \hline \end{array}$$

So, $195 \div 3 = 65$

c. $522 \div 9$

$$\begin{array}{r} 58 \\ 9 \overline{) 522} \\ \underline{-45} \\ \hline 72 \\ \underline{-72} \\ \hline \end{array}$$

So, $522 \div 9 = 58$

d. $816 \div 6$

$$\begin{array}{r} 136 \\ 6 \overline{) 816} \\ \underline{-6} \\ \hline 21 \\ \underline{-18} \\ \hline 36 \\ \underline{-36} \\ \hline \end{array}$$

So, $816 \div 6 = 136$

3. Find the quotient and remainder :

Ans. a. $68 \div 3$

$$\begin{array}{r} 22 \\ 3 \overline{) 68} \\ \underline{-6} \\ \hline 08 \\ \underline{-6} \\ \hline 2 \end{array}$$

So, Quotient = **22**
And Remainder = **2**

b. $98 \div 5$

$$\begin{array}{r} 19 \\ 5 \overline{) 98} \\ \underline{-5} \\ \hline 48 \\ \underline{-45} \\ \hline 3 \end{array}$$

So, Quotient = **19**
And Remainder = **3**

c. $47 \div 9$

$$\begin{array}{r} 5 \\ 9 \overline{) 47} \\ \underline{-45} \\ \hline 2 \end{array}$$

So, Quotient = **5**
And Remainder = **2**

d. $38 \div 6$

$$\begin{array}{r} 6 \\ 6 \overline{) 38} \\ \underline{-36} \\ \hline 2 \end{array}$$

So, Quotient = **6**
And Remainder = **2**

e. $90 \div 4$

$$\begin{array}{r} 22 \\ 4 \overline{) 90} \\ \underline{-8} \\ 10 \\ \underline{-8} \\ 2 \end{array}$$

So, Quotient = **22**
And Remainder = **2**
g. $93 \div 8$

$$\begin{array}{r} 11 \\ 8 \overline{) 93} \\ \underline{-8} \\ 13 \\ \underline{-8} \\ 5 \end{array}$$

So, Quotient = **11**
And Remainder = **5**
i. $287 \div 8$

$$\begin{array}{r} 35 \\ 8 \overline{) 287} \\ \underline{-24} \\ 47 \\ \underline{-40} \\ 7 \end{array}$$

So, Quotient = **35**
And Remainder = **7**
k. $243 \div 2$

$$\begin{array}{r} 121 \\ 2 \overline{) 243} \\ \underline{-2} \\ 04 \\ \underline{-4} \\ 03 \\ \underline{-2} \\ 1 \end{array}$$

So, Quotient = **121**
And Remainder = **1**

f. $75 \div 7$

$$\begin{array}{r} 10 \\ 7 \overline{) 75} \\ \underline{-70} \\ 5 \end{array}$$

So, Quotient = **10**
And Remainder = **5**
h. $99 \div 2$

$$\begin{array}{r} 49 \\ 2 \overline{) 99} \\ \underline{-8} \\ 19 \\ \underline{-18} \\ 1 \end{array}$$

So, Quotient = **49**
And Remainder = **1**
j. $346 \div 6$

$$\begin{array}{r} 57 \\ 6 \overline{) 346} \\ \underline{-30} \\ 46 \\ \underline{-42} \\ 4 \end{array}$$

So, Quotient = **57**
And Remainder = **4**
l. $649 \div 5$

$$\begin{array}{r} 129 \\ 5 \overline{) 649} \\ \underline{-5} \\ 14 \\ \underline{-10} \\ 49 \\ \underline{-45} \\ 4 \end{array}$$

So, Quotient = **129**
And Remainder = **4**

4. Find the dividend :

Ans. a. Divisor = 4; Quotient = 2; Remainder = 1

$$\begin{aligned} \text{So, Dividend} &= \text{Divisor} \times \text{Quotient} + \text{Remainder} \\ &= 4 \times 2 + 1 \\ &= 8 + 1 = \mathbf{9} \end{aligned}$$

b. Divisor = 9; Quotient = 6; Remainder = 5

$$\begin{aligned} \text{So, Dividend} &= \text{Divisor} \times \text{Quotient} + \text{Remainder} \\ &= 9 \times 6 + 5 \\ &= 54 + 5 = \mathbf{59} \end{aligned}$$

Exercise-7.2

Fill in the blanks :

- Ans.** a. $99,099 \div 1 = \mathbf{99,099}$ b. $\mathbf{64,324} \div 1 = 64,324$
c. $48,728 \div \mathbf{48,728} = 1$ d. $\mathbf{27,643} \div 27,643 = 1$
e. $99,999 \div 99,999 = \mathbf{1}$ f. $\mathbf{0} \div 68,394 = 0$
g. $0 \div 86,435 = \mathbf{0}$ h. $11,189 \div 1 = \mathbf{11,189}$

Exercise 7.3

1. Divide:

Ans. a. $26148 \div 4$

$$\begin{array}{r} 6537 \\ 4 \overline{) 26148} \\ \underline{-24} \\ 21 \\ \underline{-20} \\ 14 \\ \underline{-12} \\ 28 \\ \underline{-28} \\ \hline x \end{array}$$

So, $26148 \div 4 = 6537$

b. $36729 \div 7$

$$\begin{array}{r} 5247 \\ 7 \overline{) 36729} \\ \underline{-35} \\ 17 \\ \underline{-14} \\ 32 \\ \underline{-28} \\ 49 \\ \underline{-49} \\ \hline x \end{array}$$

So, $36729 \div 7 = 5247$

c. $46180 \div 5$

$$\begin{array}{r} 9236 \\ 5 \overline{) 46180} \\ \underline{-45} \\ 11 \\ \underline{-10} \\ 18 \\ \underline{-15} \\ 30 \\ \underline{-30} \\ \hline x \end{array}$$

So, $46180 \div 5 = 9236$

d. $57285 \div 9$

$$\begin{array}{r} 6365 \\ 9 \overline{) 57285} \\ \underline{-54} \\ 32 \\ \underline{-27} \\ 58 \\ \underline{-54} \\ 45 \\ \underline{-45} \\ \hline x \end{array}$$

So, $57285 \div 9 = 6365$

e. $71085 \div 3$

$$\begin{array}{r} 23695 \\ 3 \overline{) 71085} \\ \underline{-6} \\ 11 \\ \underline{-9} \\ 20 \\ \underline{-18} \\ 28 \\ \underline{-27} \\ 15 \\ \underline{-15} \\ \hline x \end{array}$$

So, $71085 \div 3 = 23,695$

f. $67408 \div 8$

$$\begin{array}{r} 8426 \\ 8 \overline{) 67408} \\ \underline{-64} \\ 34 \\ \underline{-32} \\ 20 \\ \underline{-16} \\ 48 \\ \underline{-48} \\ \hline x \end{array}$$

So, $67408 \div 8 = 8426$

2. Find the quotient and remainder:

Ans. a. $24678 \div 9$

$$\begin{array}{r} 2742 \\ 9 \overline{) 24678} \\ \underline{-18} \\ 66 \\ \underline{-63} \\ 37 \\ \underline{-36} \\ 18 \\ \underline{-18} \\ \hline x \end{array}$$

So, Quotient = **2742**
And, Remainder = **0**

b. $24837 \div 8$

$$\begin{array}{r} 3104 \\ 8 \overline{) 24837} \\ \underline{-24} \\ 08 \\ \underline{-8} \\ 037 \\ \underline{-32} \\ 5 \\ \hline x \end{array}$$

So, Quotient = **3104**
And, Remainder = **5**

c. $64239 \div 2$

$$\begin{array}{r} 32119 \\ 2 \overline{) 64239} \\ \underline{-6} \\ 04 \\ \underline{-4} \\ 02 \\ \underline{-2} \\ 03 \\ \underline{-2} \\ 19 \\ \underline{-18} \\ 1 \\ \hline x \end{array}$$

So, Quotient = **32119**
And, Remainder = **1**

d. $42323 \div 7$

$$\begin{array}{r} 6046 \\ 7 \overline{) 42323} \\ \underline{-42} \\ 032 \\ \underline{-28} \\ 43 \\ \underline{-42} \\ 1 \end{array}$$

So, Quotient = **6046**
And, Remainder = **1**

e. $84848 \div 3$

$$\begin{array}{r} 28282 \\ 3 \overline{) 84848} \\ \underline{-6} \\ 24 \\ \underline{-24} \\ 08 \\ \underline{-6} \\ 24 \\ \underline{-24} \\ 08 \\ \underline{-6} \\ 2 \end{array}$$

So, Quotient = **28282**
And, Remainder = **2**

f. $96487 \div 6$

$$\begin{array}{r} 16081 \\ 6 \overline{) 96487} \\ \underline{-6} \\ 36 \\ \underline{-36} \\ 048 \\ \underline{-48} \\ 07 \\ \underline{-6} \\ 1 \end{array}$$

So, Quotient = **16081**
And, Remainder = **1**

Exercise 7.4

1. Find the quotient :

Ans. a. $650 \div 26$

$$\begin{array}{r} 25 \\ 26 \overline{) 650} \\ \underline{-52} \\ 130 \\ \underline{-130} \\ \times \end{array}$$

So, Quotient = **25**
d. $33397 \div 13$

$$\begin{array}{r} 2569 \\ 13 \overline{) 33397} \\ \underline{-26} \\ 73 \\ \underline{-65} \\ 89 \\ \underline{-78} \\ 117 \\ \underline{-117} \\ \times \end{array}$$

So, Quotient = **2569**

b. $1064 \div 19$

$$\begin{array}{r} 56 \\ 19 \overline{) 1064} \\ \underline{-95} \\ 114 \\ \underline{-114} \\ \times \end{array}$$

So, Quotient = **56**
e. $222 \div 37$

$$\begin{array}{r} 6 \\ 37 \overline{) 222} \\ \underline{-222} \\ \times \end{array}$$

So, Quotient = **6**

c. $3514 \div 14$

$$\begin{array}{r} 251 \\ 14 \overline{) 3514} \\ \underline{-28} \\ 71 \\ \underline{-70} \\ 14 \\ \underline{-14} \\ \times \end{array}$$

So, Quotient = **251**
f. $2244 \div 22$

$$\begin{array}{r} 102 \\ 22 \overline{) 2244} \\ \underline{-22} \\ 044 \\ \underline{-44} \\ \times \end{array}$$

So, Quotient = **102**

g. $1368 \div 38$

$$\begin{array}{r} 36 \\ 38 \overline{) 1368} \\ \underline{-114} \\ 228 \\ \underline{-228} \\ 0 \end{array}$$

So, Quotient = **36**

h. $16605 \div 45$

$$\begin{array}{r} 369 \\ 45 \overline{) 16605} \\ \underline{-135} \\ 310 \\ \underline{-270} \\ 405 \\ \underline{-405} \\ 0 \end{array}$$

So, Quotient = **369**

i. $40194 \div 58$

$$\begin{array}{r} 693 \\ 58 \overline{) 40194} \\ \underline{-348} \\ 539 \\ \underline{-522} \\ 174 \\ \underline{-174} \\ 0 \end{array}$$

So, Quotient = **693**

j. $2484 \div 36$

$$\begin{array}{r} 69 \\ 36 \overline{) 2484} \\ \underline{-216} \\ 324 \\ \underline{-324} \\ 0 \end{array}$$

So, Quotient = **69**

k. $22881 \div 29$

$$\begin{array}{r} 789 \\ 29 \overline{) 22881} \\ \underline{-203} \\ 258 \\ \underline{-232} \\ 261 \\ \underline{-261} \\ 0 \end{array}$$

So, Quotient = **789**

l. $4557 \div 31$

$$\begin{array}{r} 147 \\ 31 \overline{) 4557} \\ \underline{-3100} \\ 1450 \\ \underline{-1240} \\ 217 \\ \underline{-217} \\ 0 \end{array}$$

So, Quotient = **147**

2. Find the quotient and remainder and check your answer :

Ans. a. $249 \div 34$

$$\begin{array}{r} 7 \\ 34 \overline{) 249} \\ \underline{-238} \\ 11 \end{array}$$

So, Quotient = **7**
And, Remainder = **11**

Check :

$$\begin{aligned} \text{Dividend} &= D \times Q + R \\ &= 34 \times 7 + 11 \\ &= 238 + 11 \\ &= \mathbf{249} \end{aligned}$$

b. $866 \div 15$

$$\begin{array}{r} 57 \\ 15 \overline{) 866} \\ \underline{-75} \\ 116 \\ \underline{-105} \\ 11 \end{array}$$

So, Quotient = **57**
And, Remainder = **11**

Check :

$$\begin{aligned} \text{Dividend} &= D \times Q + R \\ &= 15 \times 57 + 11 \\ &= 855 + 11 \\ &= \mathbf{866} \end{aligned}$$

c. $319 \div 37$

$$\begin{array}{r} 8 \\ 37 \overline{) 319} \\ \underline{-296} \\ 23 \end{array}$$

So, Quotient = **8**
And, Remainder = **23**

Check :

$$\begin{aligned} \text{Dividend} &= D \times Q + R \\ &= 37 \times 8 + 23 \\ &= 296 + 23 \\ &= \mathbf{319} \end{aligned}$$

d. $784 \div 51$

$$\begin{array}{r} 15 \\ 51 \overline{) 784} \\ \underline{-51} \\ 274 \\ \underline{-255} \\ 19 \end{array}$$

e. $948 \div 21$

$$\begin{array}{r} 45 \\ 21 \overline{) 948} \\ \underline{-84} \\ 108 \\ \underline{-105} \\ 3 \end{array}$$

f. $246 \div 28$

$$\begin{array}{r} 8 \\ 28 \overline{) 246} \\ \underline{-224} \\ 22 \end{array}$$

So, Quotient = **15**
And, Remainder = **29**

Check :

$$\begin{aligned}\text{Dividend} &= D \times Q + R \\ &= 51 \times 15 + 19 \\ &= 765 + 19 \\ &= \mathbf{784}\end{aligned}$$

So, Quotient = **45**
And, Remainder = **3**

Check :

$$\begin{aligned}\text{Dividend} &= D \times Q + R \\ &= 21 \times 45 + 3 \\ &= 945 + 3 \\ &= \mathbf{948}\end{aligned}$$

So, Quotient = **8**
And, Remainder = **22**

Check :

$$\begin{aligned}\text{Dividend} &= D \times Q + R \\ &= 28 \times 8 + 22 \\ &= 224 + 22 \\ &= \mathbf{246}\end{aligned}$$

Exercise-7.5

1. Divide :

- Ans. a. 80 by 10 $= 80 \div 10 = \mathbf{8}$
b. 40 by 10 $= 40 \div 10 = \mathbf{4}$
c. 290 by 10 $= 290 \div 10 = \mathbf{29}$
d. 260 by 10 $= 260 \div 10 = \mathbf{26}$
e. 320 by 10 $= 320 \div 10 = \mathbf{32}$
f. 4500 by 10 $= 4500 \div 10 = \mathbf{450}$

2. Divide :

- Ans. a. 200 by 100 $= 200 \div 100 = \mathbf{2}$
b. 700 by 100 $= 700 \div 100 = \mathbf{7}$
c. 900 by 100 $= 900 \div 100 = \mathbf{9}$
d. 6000 by 100 $= 6000 \div 100 = \mathbf{60}$
e. 8000 by 100 $= 8000 \div 100 = \mathbf{80}$
f. 5000 by 100 $= 5000 \div 100 = \mathbf{50}$

3. Word Problems :

- a. Mr Das spent for education on his two sons = ₹ 939640
 \therefore Money spent on each son = ₹ $939640 \div 2$
 $= \mathbf{₹ 469820}$
Hence, Mr Das spent ₹ 469820 on his each son.

$$\begin{array}{r} 469820 \\ 2 \overline{) 939640} \\ \underline{-8} \\ 13 \\ \underline{-12} \\ 19 \\ \underline{-18} \\ 16 \\ \underline{-16} \\ 04 \\ \underline{-4} \\ 0 \end{array}$$

- b. The government sent money to 5 villages = ₹ 985245
 \therefore Money sending to each village = ₹ $985245 \div 5$
 $= \mathbf{₹ 197049}$
Hence, each village received ₹ 197049.

$$\begin{array}{r} 197049 \\ 5 \overline{) 985245} \\ \underline{-5} \\ 48 \\ \underline{-45} \\ 35 \\ \underline{-35} \\ 024 \\ \underline{-20} \\ 45 \\ \underline{-45} \\ 0 \end{array}$$

- c. The cost price of 25 watches = ₹ 31250
 \therefore Cost price of one watch = ₹ $31250 \div 25$
 = ₹ **1250**
 Hence, we required ₹ 1250 to purchase one watch.

$$\begin{array}{r} 1250 \\ 25 \overline{) 31250} \\ \underline{-25} \\ 62 \\ \underline{-50} \\ 125 \\ \underline{-125} \\ \hline \times \end{array}$$

- d. Speed of bus = 55 km/hour
 The bus covered 55 km of distance = in 1 hours
 \therefore Bus will covered 1320 km of distance =
 in $(1320 \div 55)$ hours
 = **in 24 hours**
 Hence, the bus will take 24 hours to complete 1320 km of journey.

$$\begin{array}{r} 24 \\ 55 \overline{) 1320} \\ \underline{-110} \\ 220 \\ \underline{-220} \\ \hline \times \end{array}$$

- e. The salary of 75 employees = ₹ 990000 per month
 \therefore Salary of one employee = ₹ $(990000 \div 75)$ per month
 = ₹ 13200 per month
 Hence, each employee gets ₹ 13200 as salary of every month.

$$\begin{array}{r} 13200 \\ 75 \overline{) 990000} \\ \underline{-75} \\ 240 \\ \underline{-225} \\ 150 \\ \underline{150} \\ \hline \times \end{array}$$

- f. Number of oranges equally packed in 35 boxes = 82915
 \therefore Number of oranges packed in one box = $82915 \div 35$
 = 2369 oranges
 Hence, 2369 oranges were packed in one box.

$$\begin{array}{r} 2369 \\ 35 \overline{) 82915} \\ \underline{-70} \\ 129 \\ \underline{-105} \\ 241 \\ \underline{-210} \\ 315 \\ \underline{-315} \\ \hline \times \end{array}$$

MCQs

Tick (✓) the correct option :

- When quotient = 46, divisor = 21 and remainder = 17, the dividend is :
 a. 983
- The quotient of $2525 \div 25$ is :
 c. 101
- In the division sum, $9889 \div 29 = 341$, the dividend is :
 a. 9889
- When dividend = 10,375 and divisor = 83, the quotient is :
 c. 125
- Dividing 5408 by its ones place digit, we get :
 b. 676



What has 3 feet but can't run?

Find each quotient and remainder. Then use the decoder to solve the riddle by filling in the blanks at the bottom.

1. $40 \div 10 = \text{C}$
2. $440 \div 16 = \text{I}$
3. $607 \div 57 = \text{T}$
4. $846 \div 91 = \text{Y}$
5. $195 \div 24 = \text{S}$
6. $100 \div 20 = \text{R}$
7. $120 \div 40 = \text{A}$
8. $540 \div 15 = \text{D}$
9. $205 \div 6 = \text{K}$
10. $90 \div 8 = \text{A}$

- | | | | | |
|----------|----------|----------|----------|----------|
| A | Y | A | R | D |
| 7 | 4 | 10 | 6 | 8 |

Decoder

- | | |
|---------|--------|
| Q = 27, | R = 28 |
| Q = 10, | R = 37 |
| Q = 9, | R = 27 |
| Q = 4, | R = 0 |
| Q = 5, | R = 0 |
| Q = 34, | R = 1 |
| Q = 11, | R = 2 |
| Q = 8, | R = 3 |
| Q = 3, | R = 0 |
| Q = 36, | R = 0 |

- | |
|----------|
| I |
| T |
| Y |
| C |
| R |
| K |
| A |
| S |
| A |
| D |
- | | | | | |
|----------|----------|----------|----------|----------|
| S | T | I | C | K |
| 5 | 3 | 2 | 1 | 9 |

8

Tests For Divisibility

Exercise 8.1

1. **Pick out the numbers which are divisible by 2 :**

Ans. \because Even numbers are divisible by 2.
 \therefore a. 44 c. 18 d. 106 and h. 2672 are divisible by 2.

2. **Pick out the numbers which are divisible by 3 :**

- Ans.** a. 216
 \because Sum of digits = $2 + 1 + 6 = 9$ (divisible by 3)
 Hence, 216 is divisible by 3.
- b. 827
 \because Sum of digits = $8 + 2 + 7 = 17$ (not divisible by 3)
 Hence, 827 is not divisible by 3.
- c. 123
 \because Sum of digits = $1 + 2 + 3 = 6$ (divisible by 3)
 Hence, 123 is divisible by 3.
- d. 96432
 \because Sum of digits = $9 + 6 + 4 + 3 + 2 = 24$ (divisible by 3)
 Hence, 96432 is divisible by 3.

3. Pick out the numbers which are divisible by 4 :

Ans. a. 6512

\therefore Number formed by its last two digits = 12 (divisible by 4)
Hence, 6512 is divisible by 4.

b. 685

\therefore Number formed by its last two digits = 85 (not divisible by 4)
Hence, 685 is not divisible by 4.

c. 5634

\therefore Number formed by its last two digits = 34 (not divisible by 4)
Hence, 5634 is not divisible by 4.

d. 53111

\therefore Number formed by its last two digits = 11 (not divisible by 4)
Hence, 53111 is not divisible by 4.

4. Pick out the numbers which are divisible by 5 :

Ans. \therefore Only numbers have 0 or 5 at ones places are divisible by 5.

\therefore a. 165, c. 3965 and d. 2110 are divisible by 5.

5. Pick out the numbers which are divisible by 6 :

Ans. a. 3100

\therefore 3100 is an even number.

\therefore 3100 is divisible by 2.

Now, sum of digits = $3 + 1 + 0 + 0 = 4$ (not divisible by 3)

\therefore 3100 is not divisible by 3.

So, 3100 is also not divisible by 6.

b. 67943

\therefore 67943 is an odd number.

\therefore 67943 is not divisible by 2.

So, 67943 is also not divisible by 6.

c. 1112

\therefore 1112 is an even number.

\therefore 1112 is divisible by 2.

Now, Sum of digits = $1 + 1 + 1 + 2 = 5$ (not divisible by 3)

\therefore 1112 is not divisible by 3.

So, 1112 is also not divisible by 6.

d. 6347

\therefore 6347 is an odd number.

\therefore 6347 is not divisible by 2.

So, 6347 is also not divisible by 6.

6. If two numbers are divisible by 2. Then their sum is also divisible by 2.

Yes, the sum of 6042 and 5246 is divisible by 2.

7. \therefore 30 is divisible by 2 as well as 5.

Hence, the number of days of April, June, September and November are divisible by 2 as well as 5.

Exercise-8.2

Estimate the quotient of the following divisions. Compare the estimated quotient with the actual quotient :

Ans. a. $696 \div 6 = 116$

And, $700 \div 6 = 117$

So, estimated quotient = 117

And, Actual quotient = 116

$$\begin{array}{r} 116 \\ 6 \overline{) 696} \\ \underline{-6} \\ 09 \\ \underline{-6} \\ 36 \\ \underline{-36} \\ \hline x \end{array}$$

b. $1008 \div 6 = 168$

And, $1000 \div 6 = 167$

So, estimated quotient = 167

And, Actual quotient = 168

$$\begin{array}{r} 168 \\ 6 \overline{) 1008} \\ \underline{-6} \\ 40 \\ \underline{-36} \\ 48 \\ \underline{-48} \\ \hline x \end{array}$$

c. $1408 \div 8 = 176$

And, $1400 \div 8 = 175$

So, estimated quotient = 175

And, Actual quotient = 176

$$\begin{array}{r} 176 \\ 8 \overline{) 1408} \\ \underline{-8} \\ 60 \\ \underline{-56} \\ 48 \\ \underline{-48} \\ \hline x \end{array}$$

d. $5850 \div 15 = 390$

And, $6000 \div 15 = 400$

So, estimated quotient = 400

And, Actual quotient = 390

$$\begin{array}{r} 390 \\ 15 \overline{) 5850} \\ \underline{-45} \\ 135 \\ \underline{-135} \\ \hline x \end{array}$$

e. $1924 \div 26 = 74$

And, $2000 \div 26 = 77$

So, estimated quotient = 77

And, Actual quotient = 74

$$\begin{array}{r} 74 \\ 26 \overline{) 1924} \\ \underline{-182} \\ 104 \\ \underline{104} \\ \hline x \end{array}$$

f. $11690 \div 35 = 334$

And, $12000 \div 35 = 343$

So, estimated quotient = 343

And, Actual quotient = 334

$$\begin{array}{r} 334 \\ 35 \overline{) 11690} \\ \underline{-105} \\ 119 \\ \underline{-105} \\ 140 \\ \underline{-140} \\ \hline x \end{array}$$

MCQs

Tick (✓) the correct option :

- Which one of the following is a multiple of 7?
a. 84
- Which of the following is not a factor of 72?
a. 7
- How many even numbers are there between 30 and 50?
b. 9
- Which of the following is not a composite number?
a. 2
- Which of the following is neither a composite nor a prime number?
a. 1



NEP Life Skills

Tick (✓) the numbers divisible by the

- | | | | | | |
|----|---|---------|---------|-------|--------|
| a. | 2 | 1470, ✓ | 5582, ✓ | 1557, | 3326 ✓ |
| b. | 4 | 5445, | 4444, ✓ | 8978, | 7,822 |
| c. | 5 | 6675, ✓ | 8512, | 6827, | 8170 ✓ |
| d. | 8 | 1772, | 2983, | 6868, | 8888 ✓ |



9

Unitary Method

Exercise-9

1. What is the cost of 1 piece each ?

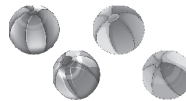
Ans. a. Cost of 1 dozen (i.e. 12) eggs = ₹ 36

So, the cost of 1 egg = ₹ $36 \div 12$
= ₹ 3



b. Cost of 4 balls = ₹ 56

So, the cost of 1 ball = ₹ $56 \div 4$
= ₹ 14



c. Cost of 4 umbrellas = ₹ 400

So, the cost of 1 umbrella = ₹ $400 \div 4$
= ₹ 100



d. Cost of 3 pens = ₹ 66

So, the cost of 1 pen = ₹ $66 \div 3$
= ₹ 22

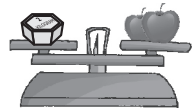


2. What is the cost of 1 kilogram of each of the following things?

Ans. a. Cost of 5 kg of rice = ₹ 100
So, the cost of 1 kg of rice = ₹ 100 ÷ 5
= ₹ 20



b. Cost of 2 kg of apples = ₹ 80
So, the correct of 1 kg of apples = ₹ 80 ÷ 2
= ₹ 40



3. The cost of 1 kg of each of these things is given :

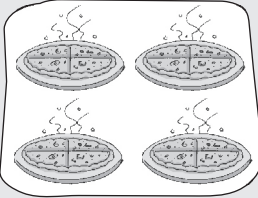
Ans.	Things	Cost of 1 kg	Find the cost of	Qty.
a.	Mangoes	35	$35 \times 4 = 140$	4 kg
b.	Papaya	18	$18 \times 3 = 54$	3 kg
c.	Sugar	22	$22 \times 5 = 110$	5 kg
d.	Salt	8	$8 \times 6 = 48$	6 kg

4. A bus carrier passengers = 55
∴ Required number of buses for 1210 passengers = $1210 \div 55 = 22$
Hence, 22 buses will be needed to carry 1210 passengers.
5. The cost of 8 metre of cloth = ₹ 176
∴ Cost of 1 metre of cloth = ₹ $176 \div 8 = ₹ 22$
So, the cost of 6 metre of cloth = ₹ $22 \times 6 = ₹ 132$
6. Number of eggs in 7 trays = 175
∴ Number of eggs in 1 tray = $175 \div 7 = 25$
So, the number of eggs in 5 such trays = $25 \times 5 = 125$
Hence, there are 125 eggs in 5 such trays.
7. Number of students in three classes = 51
∴ Number of students in one class = $51 \div 3 = 17$
So, the number of students in 5 such classes = $17 \times 5 = 85$
8. Number of shoes in 3 racks = 21
∴ Number of shoes in 1 rack = $21 \div 3 = 7$
So, the number of shoes in 7 such racks = $7 \times 7 = 49$

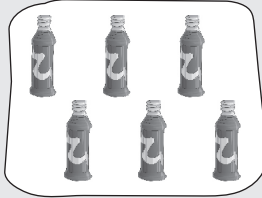
MCQs

Tick (✓) the correct option :

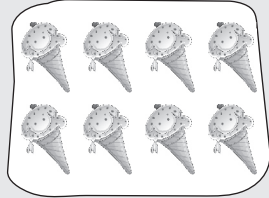
- If the cost of a dozen of bananas is ₹ 48, the cost of 3 such banana is :
b. ₹ 12
- If 15 packets have 90 chocolates, then 7 such packets have :
a. 42 chocolates
- The cost of 10 books is ₹800. The cost of 18 such books will be :
c. ₹ 1440
- The weight of 3 bags of rices is 135 kg, so the weight of one bag is :
b. 45 kg



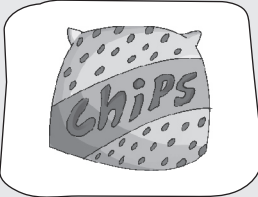
4 pizzas for ₹ 480



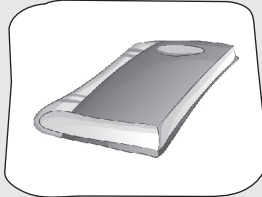
6 Cold drinks for ₹ 72



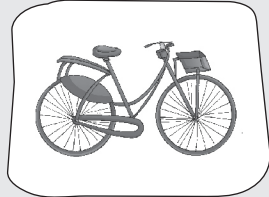
8 ice-creams for ₹ 200



1 chips packet for ₹ 20



1 book for ₹ 20



1 bicycle for ₹ 1200

And the cost of :

1 Pizza = ₹ 120

1 cold drink = ₹ 12

1 ice-cream = ₹ 25

8 packets of chips = ₹ 160

10 books = ₹ 200

2 bicycles = ₹ 2400

10

Factors and Multiples

Exercise 10.1

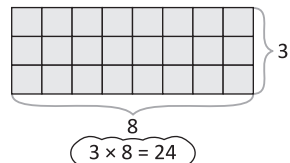
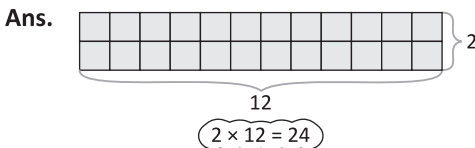
1. Fill in the blanks :

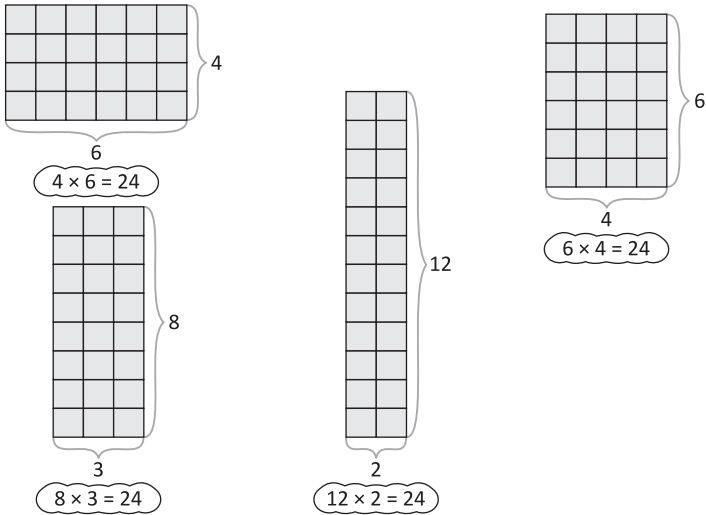
Ans. a. $8 \times 4 = 32$; 8 and 4 are **factors** of 32.

b. $3 \times 7 = 21$; **3** and **7** are factors of 21

c. $9 \times 8 = 72$; **9** and **8** are the factors of **72**.

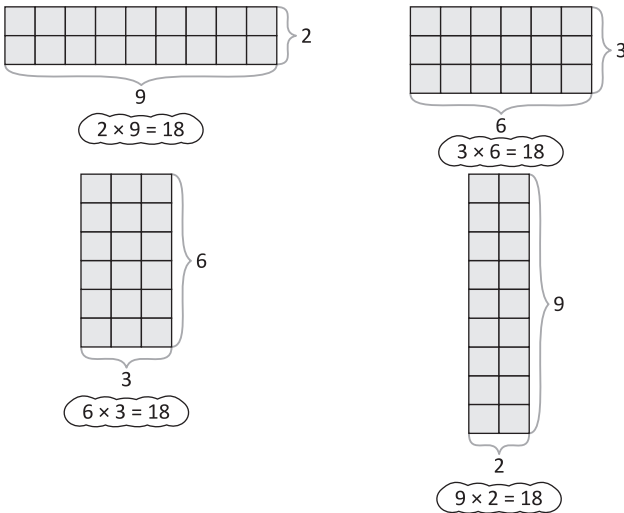
2. Below given are some blocks. They are made by using 24 squares. Arrange these squares according to you choice in different blocks. One has been done for you :





3. Use a graph paper and draw all possible rectangles you can using 18 squares. Use the squares to find the factors of 18.

Ans.



4. Use multiplication method to find the factors of:

Ans. a. 65

$1 \times 65 = 65$,
 $5 \times 13 = 65$;
 So, the factors of 65 are
 1, 5, 13 and 65.

b. 30

$1 \times 30 = 30$,
 $2 \times 15 = 30$,
 $3 \times 10 = 30$,
 $5 \times 6 = 30$;
 So, the factors of 30 are 1, 2, 3,
 5, 6, 10, 15 and 30.

c. **52**

$1 \times 52 = 52,$

$2 \times 26 = 52,$

$4 \times 13 = 52;$

So, the factors of 52 are

1, 2, 4, 13, 26 and 52.

d. **45**

$1 \times 45 = 45,$

$3 \times 15 = 45,$

$5 \times 9 = 45;$

So, the factors of 45 are 1, 3, 5,

9, 15 and 45.

5. Use division method to find the factors of :

Ans. a. **80**

$80 \div 1 = 80,$

$80 \div 2 = \boxed{40},$

$80 \div 4 = \boxed{20},$

$80 \div 5 = \boxed{16},$

$80 \div 8 = \boxed{10};$

So, the factors of 80 are

1, 2, 4, 5, 8, 10, 16, 20, 40 and 80.

b. **96**

$96 \div 1 = 96,$

$96 \div 2 = 48,$

$96 \div 3 = 32,$

$96 \div 4 = 24,$

$96 \div 6 = 16,$

$96 \div 8 = 12;$

So, the factors of 96 are 1, 2, 3,

4, 6, 8, 12, 16, 24, 32, 48 and 96.

c. **72**

$72 \div 1 = 72,$

$72 \div 2 = 36,$

$72 \div 3 = 24,$

$72 \div 4 = 18,$

$72 \div 6 = 12,$

$72 \div 8 = 9,$

So, the factors of 72 are 1, 2, 3, 4,

6, 8, 9, 12, 18, 24, 36 and 72.

d. **52**

$52 \div 1 = 52,$

$52 \div 2 = 26,$

$52 \div 4 = 13;$

So, the factors of 52 are 1, 2, 4,

13, 26 and 52.

6. In each of the following circle the factor of number from the choices given :

Ans. a. 24 → **①, ②, ③, ④, 5, ⑥, 7, ⑧, 9, 10, 15, 20, 25, 30, 40, 50**

b. 36 → **①, ②, ③, ④, 5, ⑥, 7, 8, ⑨, 10, 15, 20, 25, 30, 40, 50**

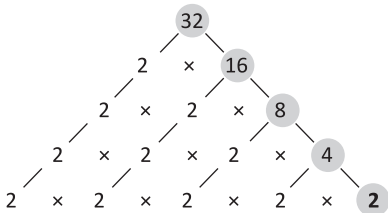
c. 40 → **①, ②, ③, ④, ⑤, 6, 7, ⑧, 9, ⑩, 15, ⑫, 25, 30, ⑬, 50**

d. 64 → **①, ②, ③, ④, 5, 6, 7, ⑧, 9, 10, 15, 20, 25, 30, 40, 50**

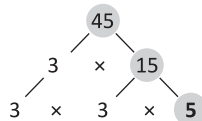
Exercise 10.2

1. Make a factor tree for each of the following :

Ans. a. 32



b. 45



c. 14



2. Find common factors of the following :

Ans. a. 12, 18

Factors of 12 are (1) (2) (3) 4, (6) and 12.

Factors of 18 are (1) (2) (3) (6) 9 and 18.

So, common factors are 1, 2, 3 and 6.

b. 32, 48

Factors of 32 are (1) (2) (4) (8) (16) and 32.

Factors of 48 are (1) (2) 3, (4) 6, (8) 12, (16) 24 and 48.

So, common factors of 1, 2, 4, 8 and 16.

c. 15, 25

Factors of 15 are (1) 3, (5) and 15.

Factors of 25 are (1) (5) and 25.

So, common factors are 1 and 5.

Exercise 10.3

1.
 - a. All prime numbers less than 20 are 2, 3, 5, 7, 11, 13, 17 and 19.
 - b. All prime numbers between 50 and 80 are 53, 59, 61, 67, 71, 73 and 79.
 - c. 1 is neither prime nor composite number.
 - d. The smallest prime number is 2.
 - e. 13 and 17 are two prime numbers which differ by 4.

2. Which of the following pairs are co-prime numbers?

Ans. a. 55, 95

5 is a common factor of 55 and 95.

So, (55, 95) is not a pair of co-prime numbers.

b. 25, 18

There is not a common factor of 25 and 18.

So, (25, 18) is a pair of co-prime numbers.

c. 4, 56

4 is a factor of 56.

So, (4, 56) is not a pair of co-prime numbers.

d. 50, 60

10 is a common factor of 50 and 60.

So, (50, 60) is not a pair of co-prime numbers.

e. 8, 15

There is not a common factor of 8 and 15.

So, (8, 15) is a pair of co-prime numbers.

f. 27, 35

There is not a common factor of 27 and 35.

So, (27, 35) is a pair of co-prime numbers.

g. 17, 80

There is not a common factor of 17 and 80.

So, (17, 80) is a pair of co-prime numbers.

h. 24, 49

There is not a common factor of 24 and 49.

So, (24, 49) is a pair of co-prime numbers.

Exercise 10.4

1. Write the first five multiples of the following numbers :

- Ans.** a. The first five multiples of 18 are 18, 36, 54, 72 and 90.
 b. The first five multiples of 14 are 14, 28, 42, 56 and 70.
 c. The first five multiples of 8 are 8, 16, 24, 32 and 40.
 d. The first five multiples of 19 are 19, 38, 57, 76 and 95.
 e. The first five multiples of 16 are 16, 32, 48, 64 and 80.
 f. The first five multiples of 12 are 12, 24, 36, 48 and 60.
 g. The first five multiples of 32 are 32, 64, 96, 128 and 160.
 h. The first five multiples of 25 are 25, 50, 75, 100 and 125.

2. Fill in the indicated multiples of the following :

Ans.	3	4	7	9	18	12	16	25	100
7th	21	28	49	63	126	84	112	175	700
4th	12	16	28	36	72	48	64	100	400
3rd	9	12	21	27	54	36	48	75	300
5th	15	20	35	45	90	60	80	125	500

3. Fill in the blanks :

- Ans.** a. **0** is a multiple of every number.
 b. 5, 10, 15, 20 are **multiples** of five.
 c. Multiples of any number are **infinite**.
 d. Each number is a multiple of **1** and **number it self**.
 e. A multiple of a number can be divided by it without leaving a **remainder**.

4. Find first three common multiples of the following. Also, circle the least common multiple :

Ans. a. 3 and 5

Multiples of 3 are 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48,

Multiples of 5 are 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55,

So, first three common multiples of 3 and 5 are 15, 30 and 45.

b. 4 and 6

Multiples of 4 are 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44,

Multiples of 6 are 6, 12, 18, 24, 30, 36, 42, 48, 54,

So, first three common multiples of 4 and 6 are 12, 24 and 36.

c. 8 and 16

Multiples of 8 are 8, 16, 24, 32, 40, 48, 56, 64, 72,

Multiples of 16 are 16, 32, 48, 64, 80, 96, 112,

So, first three common multiples of 8 and 16 are 16, 32 and 48.

d. 3 and 6

Multiples of 3 are 3, 6, 9, 12, 15, 18, 21, 24, 27, 30,

Multiples of 6 are 6, 12, 18, 24, 30, 36, 42, 48,

So, first three common multiples of 3 and 6 are 6, 12 and 18.

e. **2 and 5**

Multiples of 2 are 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32,

Multiples of 5 are 5, 10, 15, 20, 25, 30, 35, 40, 45, 50,

So, first three common multiples of 2 and 5 are 10, 20 and 30.

f. **5 and 10**

Multiples of 5 are 5, 10, 15, 20, 25, 30, 35, 40, 45, 50,

Multiples of 10 are 10, 20, 30, 40, 50, 60, 70, 80, 90,

So, first three common multiples of 5 and 10 are 10, 20 and 30.

MCQs

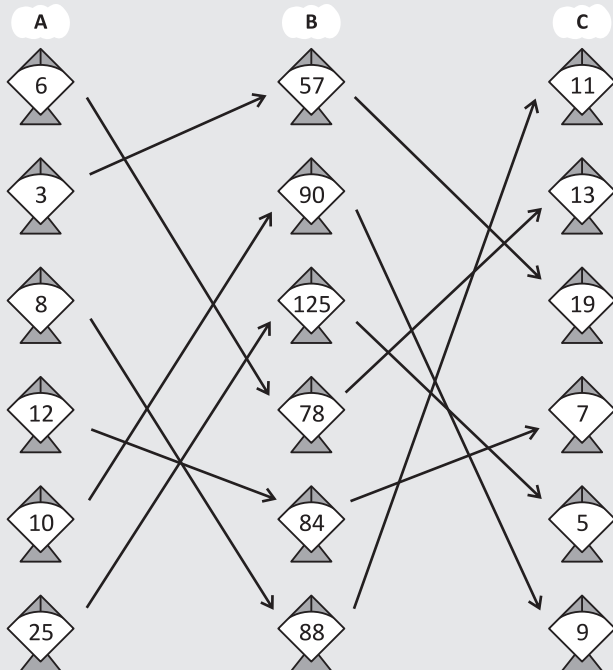
Tick (✓) the correct option :

- | | |
|---|---|
| <p>1. Factors of 3 are :
b. 1, 3</p> <p>2. Factors of 20 are :
a. 1, 2, 4, 5, 10, 20</p> <p>3. Common factors of 3 and 5 :
c. 1</p> | <p>4. Co-prime numbers are :
a. 3, 5</p> <p>5. Multiple of 7 is :
c. 35</p> |
|---|---|



NEP Adaptive Education

The number in columns A and C are the factors of the number in column B. Match and colour the kites in the same colour.



Exercise-11.1

1. What fraction of the whole is shaded in the following figures?



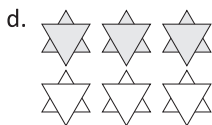
$$\frac{1}{2}$$



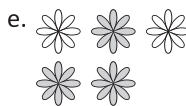
$$\frac{1}{4}$$



$$\frac{2}{3}$$



$$\frac{3}{6} \text{ or } \frac{1}{2}$$

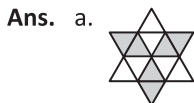


$$\frac{3}{5}$$



$$\frac{3}{8}$$

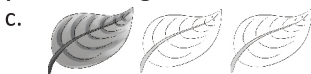
2. Colour the parts of each figure so that it represent the given fraction :



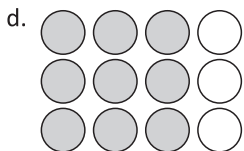
$$\frac{3}{6}$$



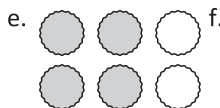
$$\frac{1}{2}$$



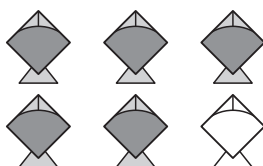
$$\frac{1}{3}$$



$$\frac{9}{12}$$



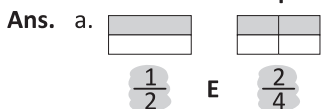
$$\frac{4}{6}$$



$$\frac{5}{6}$$

Exercise-11.2

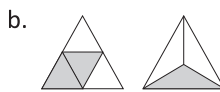
1. Write fractions for the shaded parts. Are these fractions equivalent or not? Write E for equivalent and N.E for non-equivalent :



$$\frac{1}{2}$$

E

$$\frac{2}{4}$$



$$\frac{2}{4}$$

N.E.

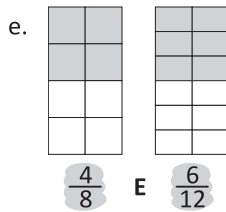
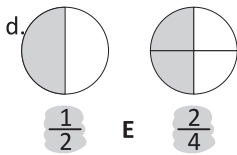
$$\frac{1}{3}$$



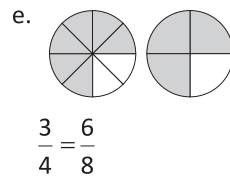
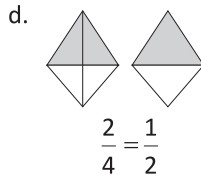
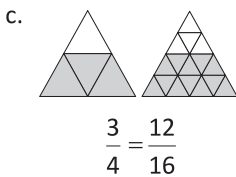
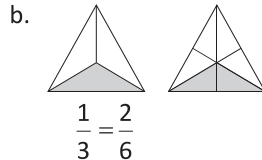
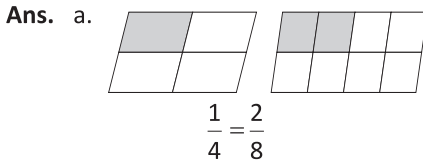
$$\frac{1}{3}$$

N.E.

$$\frac{1}{6}$$

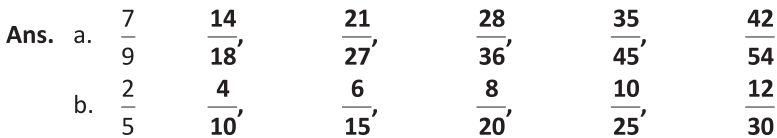


2. Colour the following to show equivalent fractions :

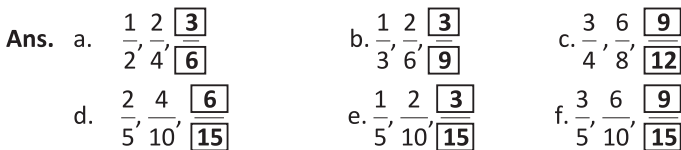


Exercise-11.3

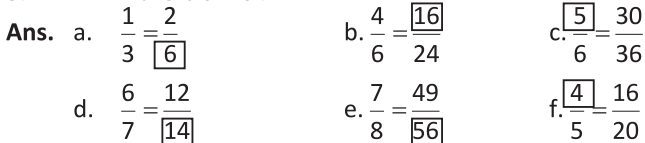
1. Write the first five equivalent fractions of :



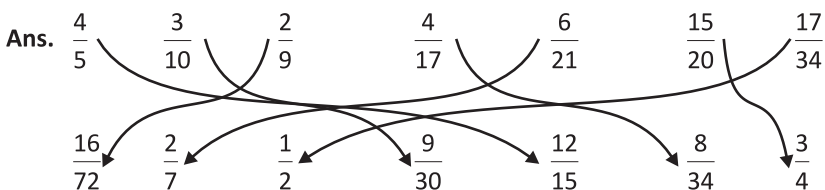
2. Write the next third equivalent fraction for each :



3. Fill in the blanks :



4. Draw lines to match equivalent fractions :



Exercise-11.4

Check whether the following are equivalent fractions or not :

a. $\frac{7}{15}, \frac{5}{12}$

By cross multiplication :

$$\frac{7}{15} \begin{array}{c} \swarrow \searrow \\ \searrow \swarrow \end{array} \frac{5}{12}$$

$$7 \times 12 = 84$$

$$5 \times 15 = 75$$

$$\therefore 7 \times 12 \neq 5 \times 15$$

So, $\frac{7}{15}$ and $\frac{5}{12}$ are not

equivalent fractions.

c. $\frac{20}{36}, \frac{18}{30}$

By cross multiplication :

$$\frac{20}{36} \begin{array}{c} \swarrow \searrow \\ \searrow \swarrow \end{array} \frac{18}{30}$$

$$20 \times 30 = 600$$

$$18 \times 36 = 648$$

$$\therefore 20 \times 30 \neq 18 \times 36$$

So, $\frac{20}{36}$ and $\frac{18}{30}$ are not

equivalent fractions.

e. $\frac{6}{12}, \frac{2}{3}$

By cross multiplication :

$$\frac{6}{12} \begin{array}{c} \swarrow \searrow \\ \searrow \swarrow \end{array} \frac{2}{3}$$

$$6 \times 3 = 18$$

$$2 \times 12 = 24$$

$$\therefore 6 \times 3 \neq 2 \times 12$$

So, $\frac{6}{12}$ and $\frac{2}{3}$ are not

equivalent fractions.

g. $\frac{15}{17}, \frac{90}{102}$

By cross multiplication :

$$\frac{15}{17} \begin{array}{c} \swarrow \searrow \\ \searrow \swarrow \end{array} \frac{90}{102}$$

$$15 \times 102 = 1530$$

$$90 \times 17 = 1530$$

$$\therefore 15 \times 102 = 90 \times 17$$

So, $\frac{15}{17}$ and $\frac{90}{102}$ are

equivalent fractions.

b. $\frac{3}{4}, \frac{9}{12}$

By cross multiplication :

$$\frac{3}{4} \begin{array}{c} \swarrow \searrow \\ \searrow \swarrow \end{array} \frac{9}{12}$$

$$3 \times 12 = 36$$

$$9 \times 4 = 36$$

$$\therefore 3 \times 12 = 9 \times 4$$

So, $\frac{3}{4}$ and $\frac{9}{12}$ are

equivalent fractions.

d. $\frac{8}{4}, \frac{7}{9}$

By cross multiplication :

$$\frac{8}{4} \begin{array}{c} \swarrow \searrow \\ \searrow \swarrow \end{array} \frac{7}{9}$$

$$8 \times 9 = 72$$

$$7 \times 4 = 28$$

$$\therefore 8 \times 9 \neq 7 \times 4$$

So, $\frac{8}{4}$ and $\frac{7}{9}$ are not

equivalent fractions.

f. $\frac{4}{7}, \frac{20}{35}$

By cross multiplication :

$$\frac{4}{7} \begin{array}{c} \swarrow \searrow \\ \searrow \swarrow \end{array} \frac{20}{35}$$

$$4 \times 35 = 140$$

$$20 \times 7 = 140$$

$$\therefore 4 \times 35 = 20 \times 7$$

So, $\frac{4}{7}$ and $\frac{20}{35}$ are

equivalent fractions.

h. $\frac{21}{30}, \frac{7}{15}$

By cross multiplication :

$$\frac{21}{30} \begin{array}{c} \swarrow \searrow \\ \searrow \swarrow \end{array} \frac{7}{15}$$

$$21 \times 15 = 315$$

$$7 \times 30 = 210$$

$$\therefore 21 \times 15 \neq 7 \times 30$$

So, $\frac{21}{30}$ and $\frac{7}{15}$ are not

equivalent fractions.

Exercise-11.5

1. Find if the given fractions are in their lowest terms :

Ans. a. $\frac{21}{64}$

\therefore There is not a common factor of 21 and 64.

So, fraction $\frac{21}{64}$ is in its lowest term.

b. $\frac{9}{72}$

\therefore 9 is a factor of 72.

So, $\frac{9}{72}$ is not in its lowest term.

c. $\frac{34}{48}$

\therefore HCF of 34 and 48 is 2.

So, $\frac{34}{48}$ is not in its lowest term.

d. $\frac{3}{10}$

\therefore There is not a common factor of 3 and 10.

So, $\frac{3}{10}$ is in its lowest term.

e. $\frac{40}{50}$

\therefore HCF of 40 and 50 is 10.

So, $\frac{40}{50}$ is not in its lowest term.

f. $\frac{11}{35}$

\therefore There is not a common factor of 11 and 35.

So, $\frac{11}{35}$ is in its lowest term.

g. $\frac{48}{144}$

\therefore 48 is a factor of 144.

So, $\frac{48}{144}$ is not in its lowest term.

h. $\frac{30}{100}$

\therefore HCF of 30 and 100 is 10.

So, $\frac{30}{100}$ is not in its lowest term.

$$d. \frac{12}{45} = \frac{4}{15}$$

$$e. \frac{36}{60} = \frac{3}{5}$$

$$f. \frac{15}{20} = \frac{3}{4}$$

Exercise-11.7

1. Circle the like fractions :

Ans. $\left(\frac{2}{5}\right)$, $\frac{1}{4}$, $\left(\frac{3}{5}\right)$, $\frac{2}{4}$, $\frac{6}{10}$, $\left(\frac{4}{5}\right)$, $\frac{3}{4}$, $\left(\frac{6}{5}\right)$, $\frac{9}{8}$, $\left(\frac{1}{5}\right)$, $\frac{1}{4}$

2. Put a cross (X) on the unlike fractions :

Ans. $\frac{1}{8}$, $\frac{2}{4}$, $\frac{3}{7}$, $\frac{3}{8}$, $\frac{5}{8}$, $\frac{3}{9}$, $\frac{6}{12}$, $\frac{7}{8}$, $\frac{9}{8}$

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

Ans. a. $\frac{6}{15}$, $\left(\frac{7}{15}\right)$ b. $\frac{2}{10}$, $\left(\frac{5}{10}\right)$ c. $\left(\frac{9}{18}\right)$, $\frac{6}{18}$

4. Cross (X) out the smallest fraction in the following :

Ans. a. $\frac{6}{12}$, $\frac{3}{12}$, $\frac{2}{12}$, $\frac{5}{12}$, $\frac{11}{12}$, $\frac{9}{12}$, $\frac{1}{12}$ b. $\frac{3}{18}$, $\frac{4}{18}$, $\frac{2}{18}$, $\frac{16}{18}$, $\frac{5}{18}$, $\frac{6}{18}$

5. Arrange the following in the ascending order :

Ans. a. $\frac{5}{16}$, $\frac{6}{16}$, $\frac{3}{16}$, $\frac{2}{16}$, $\frac{13}{16}$, $\frac{9}{16}$, $\frac{7}{16}$, $\frac{14}{16}$ b. $\frac{8}{25}$, $\frac{3}{25}$, $\frac{15}{25}$, $\frac{6}{25}$, $\frac{20}{25}$, $\frac{19}{25}$, $\frac{18}{25}$, $\frac{24}{25}$

$\therefore 2 < 3 < 5 < 6 < 7 < 9 < 13 < 14$ $\therefore 3 < 6 < 8 < 15 < 18 < 19 < 20 < 24$

So, $\frac{2}{16} < \frac{3}{16} < \frac{5}{16} < \frac{6}{16} < \frac{7}{16} < \frac{9}{16}$ So, $\frac{3}{25} < \frac{6}{25} < \frac{8}{25} < \frac{15}{25} < \frac{18}{25} < \frac{19}{25}$

$< \frac{13}{16} < \frac{14}{16}$ $< \frac{20}{25} < \frac{24}{25}$

6. Arrange the following in the descending order :

Ans. a. $\frac{6}{15}$, $\frac{8}{15}$, $\frac{9}{15}$, $\frac{3}{15}$, $\frac{2}{15}$, $\frac{4}{15}$, $\frac{5}{15}$, $\frac{1}{15}$ _____

$\therefore 9 > 8 > 6 > 5 > 4 > 3 > 2 > 1$

So, $\frac{9}{15} > \frac{8}{15} > \frac{6}{15} > \frac{5}{15} > \frac{4}{15} > \frac{3}{15} > \frac{2}{15} > \frac{1}{15}$

b. $\frac{1}{20}$, $\frac{9}{20}$, $\frac{4}{20}$, $\frac{5}{20}$, $\frac{6}{20}$, $\frac{3}{20}$, $\frac{19}{20}$ _____

$\therefore 19 > 9 > 6 > 5 > 4 > 3 > 1$

So, $\frac{19}{20} > \frac{9}{20} > \frac{6}{20} > \frac{5}{20} > \frac{4}{20} > \frac{3}{20} > \frac{1}{20}$

7. State the following statements true or false :

Ans. a. True, b. False, c. False, d. True, e. True, f. True;

Exercise-11.8

1. Which of the following are like fractions and which are unlike fractions?

Ans. a. $\frac{1}{8}$, $\frac{2}{8}$, $\frac{4}{8}$, $\frac{5}{8}$ are like fractions.

b. $\frac{1}{2}$, $\frac{3}{4}$, $\frac{5}{6}$, $\frac{5}{7}$, $\frac{5}{8}$ are unlike fractions.

- c. $\frac{1}{4}, \frac{3}{6}, \frac{4}{7}, \frac{3}{10}, \frac{9}{14}$ are unlike fractions.
 d. $\frac{3}{13}, \frac{5}{14}, \frac{6}{17}, \frac{10}{19}, \frac{11}{23}$ are unlike fractions.

2. Which are proper fractions?

Ans. a. $\frac{8}{17}$, c. $\frac{3}{7}$ d. $\frac{2}{9}$ and e. $\frac{4}{9}$ are proper fractions.

3. Which are improper fractions?

Ans. b. $\frac{13}{7}$ and e. $\frac{15}{7}$ are improper fractions.

4. Which of the following are unit fractions?

Ans. $\frac{1}{3}, \frac{1}{4}, \frac{1}{10}$ and $\frac{1}{13}$ are unit fractions.

5. Which are mixed fractions?

Ans. b. $2\frac{1}{2}$, c. $3\frac{4}{9}$ and e. $5\frac{1}{2}$ are mixed fractions.

6. Convert the following mixed fractions into improper fractions :

Ans. a. $3\frac{1}{5} = \frac{3 \times 5 + 1}{5} = \frac{15 + 1}{5} = \frac{16}{5}$ b. $1\frac{7}{8} = \frac{1 \times 8 + 7}{8} = \frac{8 + 7}{8} = \frac{15}{8}$
 c. $3\frac{3}{8} = \frac{3 \times 8 + 3}{8} = \frac{24 + 3}{8} = \frac{27}{8}$ d. $7\frac{1}{4} = \frac{7 \times 4 + 1}{4} = \frac{28 + 1}{4} = \frac{29}{4}$

7. Fill in the blanks :

- Ans. a. A **unit** fraction always has 1 as the numerator.
 b. A mixed fraction is a combination of a whole number and a **proper** fraction.
 c. If the numerator of a fraction is less than its denominator, it is a **proper** fraction.

Exercise-11.9

Find the sum of the following :

Ans. a. $\frac{1}{6}, \frac{3}{6}$ b. $\frac{1}{9}, \frac{5}{9}$
 $\therefore \text{Sum} = \frac{1}{6} + \frac{3}{6}$ $\therefore \text{Sum} = \frac{1}{9} + \frac{5}{9}$
 $= \frac{1+3}{6}$ $= \frac{1+5}{9}$
 $= \frac{4}{6} \text{ or } \frac{2}{3}$ $= \frac{6}{9} \text{ or } \frac{2}{3}$
 c. $\frac{5}{8}, \frac{7}{8}$ d. $\frac{3}{18}, \frac{6}{18}$
 $\therefore \text{Sum} = \frac{5}{8} + \frac{7}{8}$ $\therefore \text{Sum} = \frac{3}{18} + \frac{6}{18}$
 $= \frac{5+7}{8}$ $= \frac{3+6}{18}$
 $= \frac{12}{8} \text{ or } \frac{3}{2}$ $= \frac{9}{18} \text{ or } \frac{1}{2}$

$$\begin{aligned} \text{e. } & \frac{11}{19}, \frac{7}{19} \\ \therefore \text{ Sum} &= \frac{11}{19} + \frac{7}{19} \\ &= \frac{11+7}{19} \\ &= \frac{18}{19} \end{aligned}$$

$$\begin{aligned} \text{g. } & \frac{11}{15}, \frac{2}{15} \\ \therefore \text{ Sum} &= \frac{11}{15} + \frac{2}{15} \\ &= \frac{11+2}{15} = \frac{13}{15} \end{aligned}$$

$$\begin{aligned} \text{i. } & \frac{28}{45}, \frac{9}{45} \\ \therefore \text{ Sum} &= \frac{28}{45} + \frac{9}{45} \\ &= \frac{28+9}{45} \\ &= \frac{37}{45} \end{aligned}$$

$$\begin{aligned} \text{k. } & \frac{21}{55}, \frac{9}{55} \\ \therefore \text{ Sum} &= \frac{21}{55} + \frac{9}{55} \\ &= \frac{21+9}{55} \\ &= \frac{30}{55} \text{ or } \frac{6}{11} \end{aligned}$$

$$\begin{aligned} \text{m. } & \frac{8}{27}, \frac{9}{27} \\ \therefore \text{ Sum} &= \frac{8}{27} + \frac{9}{27} \\ &= \frac{8+9}{27} = \frac{17}{27} \end{aligned}$$

$$\begin{aligned} \text{o. } & \frac{6}{15}, \frac{3}{15}, \frac{4}{15} \\ \therefore \text{ Sum} &= \frac{6}{15} + \frac{3}{15} + \frac{4}{15} \\ &= \frac{6+3+4}{15} \\ &= \frac{13}{15} \end{aligned}$$

$$\begin{aligned} \text{f. } & \frac{5}{16}, \frac{3}{16} \\ \therefore \text{ Sum} &= \frac{5}{16} + \frac{3}{16} \\ &= \frac{5+3}{16} \\ &= \frac{8}{16} \text{ or } \frac{1}{2} \end{aligned}$$

$$\begin{aligned} \text{h. } & \frac{6}{19}, \frac{3}{19} \\ \therefore \text{ Sum} &= \frac{6}{19} + \frac{3}{19} \\ &= \frac{6+3}{19} = \frac{9}{19} \end{aligned}$$

$$\begin{aligned} \text{j. } & \frac{11}{20}, \frac{5}{20} \\ \therefore \text{ Sum} &= \frac{11}{20} + \frac{5}{20} \\ &= \frac{11+5}{20} \\ &= \frac{16}{20} \text{ or } \frac{4}{5} \end{aligned}$$

$$\begin{aligned} \text{l. } & \frac{5}{28}, \frac{20}{28} \\ \therefore \text{ Sum} &= \frac{5}{28} + \frac{20}{28} \\ &= \frac{5+20}{28} \\ &= \frac{25}{28} \end{aligned}$$

$$\begin{aligned} \text{n. } & \frac{5}{24}, \frac{18}{24} \\ \therefore \text{ Sum} &= \frac{5}{24} + \frac{18}{24} \\ &= \frac{5+18}{24} = \frac{23}{24} \end{aligned}$$

$$\begin{aligned} \text{p. } & \frac{1}{8}, \frac{3}{8}, \frac{2}{8} \\ \therefore \text{ Sum} &= \frac{1}{8} + \frac{3}{8} + \frac{2}{8} \\ &= \frac{1+3+2}{8} \\ &= \frac{6}{8} \text{ or } \frac{3}{4} \end{aligned}$$

Exercise-11.10**Subtract the following :**

Ans. a. $\frac{2}{7} - \frac{1}{7}$
 $= \frac{2-1}{7} = \frac{1}{7}$

c. $\frac{13}{17} - \frac{8}{17}$
 $= \frac{13-8}{17} = \frac{5}{17}$

e. $\frac{5}{18} - \frac{3}{18}$
 $= \frac{5-3}{18} = \frac{2}{18}$ or $\frac{1}{9}$

g. $\frac{28}{48} - \frac{27}{48}$
 $= \frac{28-27}{48} = \frac{1}{48}$

i. $\frac{5}{15} - \frac{4}{15}$
 $= \frac{5-4}{15} = \frac{1}{15}$

k. $\frac{25}{30} - \frac{9}{30}$
 $= \frac{25-9}{30}$
 $= \frac{16}{30}$

m. $\frac{9}{9} - \frac{3}{9}$
 $= \frac{9-3}{9}$
 $= \frac{6}{9}$ or $\frac{2}{3}$

o. $\frac{10}{21} - \frac{7}{21}$
 $= \frac{10-7}{21}$
 $= \frac{3}{21}$ or $\frac{1}{7}$

b. $\frac{8}{13} - \frac{5}{13}$
 $= \frac{8-5}{13} = \frac{3}{13}$

d. $\frac{6}{10} - \frac{1}{10}$
 $= \frac{6-1}{10}$

$= \frac{5}{10}$ or $\frac{1}{2}$

f. $\frac{10}{31} - \frac{6}{31}$
 $= \frac{10-6}{31} = \frac{4}{31}$

h. $\frac{15}{20} - \frac{8}{20}$
 $= \frac{15-8}{20} = \frac{7}{20}$

j. $\frac{12}{14} - \frac{8}{14}$
 $= \frac{12-8}{14}$

$= \frac{4}{14}$ or $\frac{2}{7}$

l. $\frac{11}{12} - \frac{7}{12}$
 $= \frac{11-7}{12}$

$= \frac{4}{12}$ or $\frac{1}{3}$

n. $\frac{8}{13} - \frac{5}{13}$
 $= \frac{8-5}{13} = \frac{3}{13}$

p. $\frac{9}{10} - \frac{5}{10}$
 $= \frac{9-5}{10}$
 $= \frac{4}{10}$ or $\frac{2}{5}$

MCQs

Tick (✓) the correct choice :

1. $\frac{1}{3} + \frac{5}{3} - \frac{2}{3} =$ _____ :

a. $\frac{4}{3}$

2. $\frac{4}{5} + \frac{2}{5} + \frac{1}{5} =$ _____ :

b. $\frac{7}{5}$

3. Lowest form of $\frac{16}{144}$ is :

c. $\frac{1}{9}$

4. 5 minutes of 1 hour is :

c. $\frac{1}{12}$

5. Like fractions are :

c. $\frac{2}{7}, \frac{5}{7}$



NEP Multiple Intelligence

Complete the fraction crossword given below. Write the pairs of like fractions in the box given below.

$\frac{15}{16}$	-	$\frac{1}{2}$	=	$\frac{7}{16}$	
-					
$\frac{3}{4}$	-	$\frac{10}{16}$	=	$\frac{1}{8}$	
=		-			
$\frac{3}{16}$	-	$\frac{1}{8}$	=	$\frac{1}{16}$	
			=	-	
$\frac{2}{3}$	-	$\frac{2}{12}$	=	$\frac{1}{2}$	
-					
$\frac{2}{9}$	$\frac{21}{24}$	-	$\frac{5}{6}$	=	$\frac{1}{24}$
=	-	-			
$\frac{4}{9}$	$\frac{3}{4}$	-	$\frac{7}{12}$	=	$\frac{1}{6}$
			=		
			$\frac{1}{8}$	$\frac{1}{4}$	

LIKE FRACTIONS

$\frac{15}{16}$,

$\frac{7}{16}$,

$\frac{10}{16}$,

$\frac{3}{16}$,

$\frac{1}{16}$,

$\frac{2}{16}$,

$\frac{4}{16}$

Exercise-12.1

1. Write the decimals :

Ans. a. $\frac{9}{10} = 0.9$

c. $\frac{27}{10} = 2.7$

e. $\frac{3}{10} = 0.3$

g. $\frac{7}{10} = 0.7$

b. $\frac{6}{10} = 0.6$

d. $\frac{4}{10} = 0.4$

f. $\frac{15}{10} = 1.5$

h. $\frac{58}{10} = 5.8$

2. Write in common fractions :

Ans. a. $0.3 = \frac{3}{10}$

c. $0.8 = \frac{8}{10}$

e. $0.6 = \frac{6}{10}$

g. $0.1 = \frac{1}{10}$

b. $0.7 = \frac{7}{10}$

d. $0.4 = \frac{4}{10}$

f. $1.0 = \frac{10}{10}$ or $\frac{1}{1}$

h. $0.2 = \frac{2}{10}$

3. Write in decimal form :

Ans. a. $13\frac{3}{10} = 13.3$

c. $26\frac{1}{10} = 26.1$

b. $17\frac{4}{10} = 17.4$

d. $39\frac{4}{10} = 39.4$

Exercise-12.2

1. Write as decimals :

Ans. a. $\frac{19}{100} = 0.19$

c. $\frac{64}{100} = 0.64$

b. $\frac{42}{100} = 0.42$

d. $4\frac{3}{100} = 4.03$

2. Write as fractions :

Ans. a. $0.08 = \frac{8}{100}$

c. $3.38 = \frac{338}{100}$

b. $0.38 = \frac{38}{100}$

d. $6.07 = \frac{607}{100}$

3. Write in words :

Ans. a. $0.09 =$ Zero point zero nine.

c. $1.18 =$ One point one eight.

b. $0.15 =$ Zero point one five.

d. $5.43 =$ Five point four three.

4. Write as decimals :

Ans. a. $\frac{7}{100} = 0.07$

b. $\frac{9}{100} = 0.09$

$$c. 2500\frac{36}{100} = 2500.36$$

$$d. 14\frac{5}{100} = 14.05$$

Exercise-12.3

1. Write in decimals :

$$\text{Ans. a. } \frac{7}{1000} = 0.007$$

$$b. \frac{3}{1000} = 0.003$$

$$c. \frac{25}{1000} = 0.025$$

$$d. \frac{213}{1000} = 0.213$$

$$e. \frac{104}{1000} = 0.104$$

$$f. 2\frac{13}{1000} = 2.013$$

$$g. 7\frac{64}{1000} = 7.064$$

$$h. 15\frac{123}{1000} = 15.123$$

2. Write in common fractions :

$$\text{Ans. a. } 0.023 = \frac{23}{1000}$$

$$b. 61.851 = \frac{61851}{1000}$$

$$c. 93.540 = \frac{93540}{1000}$$

$$d. 48.263 = \frac{48263}{1000}$$

3. Write in words :

$$\text{Ans. a. } 0.006 = \text{Zero point zero-zero six.}$$

$$b. 4.834 = \text{Four point eight three four.}$$

$$c. 3.415 = \text{Three point four one five.}$$

$$d. 5.291 = \text{Five point two nine one.}$$

Exercise-12.4

1. Write the place and place value of :

$$\text{Ans. a. } 8 \text{ in } 5.813 \quad \text{place } \mathbf{tenths} \quad \text{place-value } \mathbf{0.8}$$

$$b. 4 \text{ in } 5.413 \quad \text{place } \mathbf{tenths} \quad \text{place-value } \mathbf{0.4}$$

$$c. 7 \text{ in } 6.710 \quad \text{place } \mathbf{tenths} \quad \text{place-value } \mathbf{0.7}$$

2. Fill in the blanks :

$$\text{Ans. a. } 0.13 = \mathbf{1} \text{ tenths } \quad \mathbf{3} \text{ hundredths.}$$

$$b. 0.17 = \mathbf{1} \text{ tenths } \quad \mathbf{7} \text{ hundredths.}$$

$$c. 0.117 = \mathbf{1} \text{ tenths } \quad \mathbf{1} \text{ hundredths } \quad \mathbf{7} \text{ thousandths.}$$

3. Fill in the boxes :

$$\text{Ans. a. } 8.02 = 8 + \frac{2}{\boxed{100}}$$

$$b. 9.01 = 9 + \frac{1}{\boxed{100}}$$

$$c. 6.132 = 6 + \frac{1}{\boxed{10}} + \frac{3}{\boxed{100}} + \frac{2}{\boxed{1000}}$$

$$d. 7.321 = 7 + \frac{3}{\boxed{10}} + \frac{2}{\boxed{100}} + \frac{1}{\boxed{1000}}$$

4. Write the standard numeral (short form) in decimals :

$$\text{Ans. a. } 300 + 20 + 8 + \frac{3}{10} + \frac{5}{100} + \frac{4}{1000} = 328.354$$

$$b. 200 + \frac{2}{10} + \frac{4}{100} + \frac{7}{1000} = 200.247$$

$$c. 10 + 3 + \frac{2}{10} + \frac{5}{1000} = 13.205$$

$$d. 7 + \frac{9}{100} + \frac{3}{1000} = 7.093$$

e. $4 + \frac{7}{1000} = 4.007$

5. Write the place-value of 5 in each of the following :

- Ans. a. 28.35 **0.05** b. 53.376 **50**
 c. 43.578 **0.5** d. 103.805 **0.005**

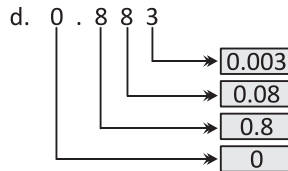
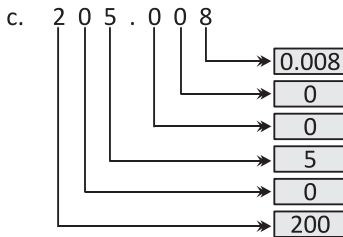
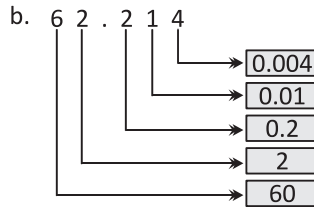
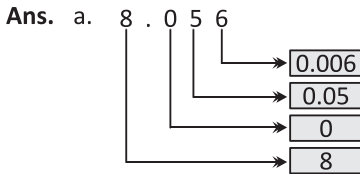
6. Write each of the following in the expanded form :

Ans. a. $7.39 = 7 + \frac{3}{10} + \frac{9}{100}$ b. $5.625 = 5 + \frac{6}{10} + \frac{2}{100} + \frac{5}{1000}$

c. $76.108 = 70 + 6 + \frac{1}{10} + \frac{8}{1000}$

d. $359.728 = 300 + 50 + 9 + \frac{7}{10} + \frac{2}{100} + \frac{8}{1000}$

7. Make a place-value chart and write the following numbers in it :



Exercise-12.5

State 'true' or 'false' :

- Ans. a. $0.49 = 0.490$ **True** b. $3.049 = 3.49$ **False**
 c. $2.980 = 2.98$ **True** d. $24.24 = 24.024$ **False**
 e. $6.9 = 6.900$ **True** f. $3.87 = 3.087$ **False**
 g. $0.01 = 0.001$ **False** h. $0.400 = 0.40$ **True**
 i. $0.001 = 0.100$ **False** j. $7.6 = 7.06$ **True**

Exercise-12.6

1. Write 'correct' or 'incorrect' is each of the following :

- Ans. a. $\frac{4}{10} = 0.04$ **Incorrect** b. $\frac{30}{100} = 0.30$ **Correct**

2. Compare and put '<' or '>' for each :

- Ans. a. $0.202 < 0.220$ b. $6.12 < 6.21$
 c. $0.8 < 0.81$ d. $0.324 < 0.384$

Exercise-13.1

Ans. 1. The lowest unit of length is millimetre (mm) and the highest unit of length is kilometre (km) in general use.

Ans. 2. The lowest unit of weight is milligram (mg) and the highest unit of weight is kilogram (kg) in general use.

Ans. 3. The lowest unit of capacity is millilitre (*ml*) and the highest unit of capacity is kilolitre (*kl*) in general use.

4. Fill in the blanks :

Ans. a. 1 km = **1000** m

b. 1 m = **1000** mm

c. 1 g = **1000** mg

d. 1 m = **100** cm

e. 1 *l* = **10** *dl*

f. 1 *kl* = **1000** *l*

g. 1 *l* = **1000** *ml*

h. 1 kg = **1000** g

Ans. 5. 1000 grams make one kilogram.

Ans. 6. 100 decagrams make one kilogram.

Ans. 7. State 'true' or 'false' in each :

Ans. a. 1 m = 100 cm

True

b. 1 km = 100 m

False

c. 100 *ml* = 1 *l*

False

d. 1000 *ml* = 1 *l*

True

e. 1 kg = 1000 g

True

f. 100 g = 1 kg

False

g. 10 cm = 1 dm

True

h. 10 dm = 1 km

False

Exercise-13.2**1. Fill in the blanks :**

Ans. a. 4475 m = 4 km **475** m

b. 4 km 675 m = **4675** m

c. 9720 *l* = **9** *kl* **720** *l*

d. 3005 g = **3** kg **5** g

e. 5525 mg = **5** g **5** dg **2** cg **5** mg

f. 6080 mm = **6** m **0** dm **8** cm **0** mm

2. State 'True' or 'False' :

Ans. a. 5 km 500 m = 4 km 1500 m

True

b. 4 m 225 cm = 4225 m

False

c. 8 kg 250 g = 8250 g

True

d. 12 *l* 700 *ml* = 11 *l* 1700 *ml*

True

e. 4085 mg = 4 g 85 mg

True

f. 3005 *ml* = 3 *l* 50 *ml*

False

3. Express in terms of kg and g :

Ans. a. 8459 g

$$= (8000 + 459) \text{ g}$$

$$= 8 \times 1000 \text{ g} + 459 \text{ g}$$

$$= \mathbf{8 \text{ kg } 459 \text{ g}}$$

b. 14978 g

$$= (14000 + 978) \text{ g}$$

$$= 14 \times 1000 \text{ g} + 978 \text{ g}$$

$$= \mathbf{14 \text{ kg } 978 \text{ g}}$$

c. 24689 g

$$= (24000 + 689) \text{ g}$$

$$= 24 \times 1000 \text{ g} + 689 \text{ g}$$

$$= \mathbf{24 \text{ kg } 689 \text{ g}}$$

4. Express in terms of km and m :

- Ans. a. 54000 m
 $= 54 \times 1000$ m
= 54 km
- b. 65767 m
 $= (65000 + 767)$ m
 $= 65 \times 1000$ m + 767 m
= 65 km 767 m
- c. 7334 m
 $= (7000 + 334)$ m
 $= 7 \times 1000$ m + 334 m
= 7 km 334 m

5. Express in terms of m, dm, cm and mm :

- Ans. a. 4085 mm
 $= (4000 + 80 + 5)$ mm
 $= 4 \times 1000$ mm + 8×10 mm + 5 mm
= 4 m 8 cm 5 mm
- b. 18384 mm
 $= (18000 + 300 + 80 + 4)$ mm
 $= 18 \times 1000$ mm + 3×100 mm + 8×10 mm + 4 mm
= 18 m 3 dm 8 cm 4 mm
- c. 21535 mm
 $= (21000 + 500 + 30 + 5)$ mm
 $= 21 \times 1000$ mm + 5×100 mm + 3×10 mm + 5 mm
= 21 m 5 dm 3 cm 5 mm

6. Express in terms of kl and l :

- Ans. a. 4000 l
 $= 4 \times 1000$ l
= 4 kl
- b. 7859 l
 $= (700 + 859)$ l
 $= 7 \times 1000$ l + 859 l
= 7 kl 859 l
- c. 13207 l
 $= (13000 + 207)$ l
 $= 13 \times 1000$ l + 207 l
= 13 hl 207 l

7. Express in terms of g and cg :

- Ans. a. 535 cg
 $= (500 + 35)$ cg
 $= 5 \times 100$ cg + 35 cg
= 5 g 35 cg
- b. 564 cg
 $= (500 + 64)$ cg
 $= 5 \times 100$ cg + 64 cg
= 5 g 64 cg
- c. 900 cg
 $= 9 \times 100$ cg
= 9 g

Exercise-13.3

1. Add :

- Ans. a.

km	m
45	546
+ 68	219
113	765
- b.

kl	l
92	462
+ 73	761
166	223
- c.

m	cm
44	56
+ 35	68
80	24

2. Find the sum of :

- Ans. a. 25 km 900 m and 35 km 475 m.
- b. 7740 ml and 17 l 365 ml.
= 7 l 7740 ml and 17 ml 365 ml

km	m
25	900
+ 35	475
61	375

l	ml
7	740
+ 17	365
25	105

c. $15/500\text{ ml}$, 750 ml and $2/250\text{ ml}$.

l	ml
15	500
0	750
+2	250
18	500

3.

Ans. Ajay travelled on first day = 64 km 175 m

He travelled on second day = 88 km 126 m

And, he travelled on third day = 20 km 54 m

\therefore Total distance covered by Ajay

$$= 64\text{ km }175\text{ m} + 88\text{ km }126\text{ m} + 20\text{ km }54\text{ m}$$

$$= 172\text{ km }355\text{ m}$$

Hence, Ajay covered 172 km 355 m in 3 days.

km	m
64	175
88	126
+20	054
172	355

4.

Ans. Weight of one almirah = 32 kg 444 g

And, weight of a sack of rice = 36 kg 168 g

\therefore Total weight of 2 almirahs and a sack of rice

$$= 32\text{ kg }444\text{ g} + 32\text{ kg }444\text{ g} + 36\text{ kg }168\text{ g}$$

$$= 101\text{ kg }56\text{ g}$$

Hence, total 101 kg 56 g of weight loaded on the truck.

kg	g
32	444
32	444
+36	168
101	056

5.

Ans. Weight of sugar in first bag = 98 kg 750 g

Weight of sugar in second bag = 97 kg 500 g

And weight of sugar in third bag = 99 kg 150 g

\therefore Total weight of sugar = 98 kg 750 g + 97 kg 500 g + 99 kg 150 g

$$= 295\text{ kg }400\text{ g}$$

Hence, total 295 kg 400 g of sugar contained in three bags.

kg	g
98	750
97	500
+99	150
235	400

Exercise-13.4

1. Subtract the following :

Ans. a.

18 l	500 ml
- 3 l	250 ml
15 l	250 ml

b.

7 km	750 m
- 6 km	500 m
1 km	250 m

c.

41 cm	8 mm
- 29 cm	3 mm
12 cm	5 mm

2. Find the difference between the following :

Ans. a. 8 cm 1 mm and 5 cm 3 mm

b. 7 kg 300 g and 3 kg 600 g

cm	mm
8	1
- 5	3
2	8

kg	g
7	300
- 3	600
3	700

c. $7\text{ l } 100\text{ ml}$ and $5\text{ l } 500\text{ ml}$

l	ml
7	100
-5	500
1	600

d. 13 kg and $7\text{ kg } 500\text{ g}$

kg	g
13	000
-7	500
5	500

3.

Ans. Total distance of a race = 100 m

Distance covered by Renu = 79 m 50 cm

$$\therefore \text{Remaining distance uncovered} = 100\text{ m} - 79\text{ m } 50\text{ cm} \\ = 20\text{ m } 50\text{ cm}$$

Hence, 20 m 50 cm of distance left uncovered by Renu.

m	cm
100	00
-79	50
20	50

4.

Ans. Original length of candle = 32 cm

And, length of candle after lightening = 21 cm 5 mm

$$\therefore \text{Candle burnt out} = 32\text{ cm} - 21\text{ cm } 5\text{ mm} \\ = 10\text{ cm } 5\text{ mm}$$

Hence, 10 cm 5 mm of candle was burnt out.

cm	mm
32	0
-21	5
10	5

5.

Ans. Petrol purchased by petrol pump owner = 9 k/ 500 l

And, Petrol sold out during the day = 8 k/ 700 l

$$\text{So, Remaining petrol with him} = 9\text{ k}/500\text{ l} - 8\text{ k}/700\text{ l} \\ = 800\text{ l}$$

k/	l
9	500
-8	700
0	800

6.

Ans. Wheat was in the ration shop = 1320 kg 500 g

And, wheat sold out during the day = 780 kg 700 g

$$\text{So, Remaining wheat in the ration shop} \\ = 1320\text{ kg } 500\text{ g} - 780\text{ kg } 700\text{ g} \\ = 539\text{ kg } 800\text{ g}$$

kg	g
1320	500
-780	700
539	800

MCQs

Tick (✓) the correct option :

- 2 km = _____ m :
c. 2000
- $6725\text{ m}/ =$ _____ $/ +$ _____ $\text{ m}/ :$
c. 6,725
- 1 km = _____ dam :
b. 100
- 1 cm = _____ mm :
a. 10
- 368 cm = _____ m _____ cm :
b. 3, 68
- Weight of lion can be :
c. 200 kg



1. 2 litres of milk is stored in the refrigerator.
2. Volume of juice stored in the refrigerator = $6 \times 200 \text{ ml} - 1200 \text{ ml}$
= $1/200 \text{ ml}$.
3. The total weight of the apples stored in the refrigerator = $10 \times 250 \text{ g}$
= $2500 \text{ g} = 2 \text{ kg } 500 \text{ g}$.
4. The total weight of the lemons stored in the refrigerator = $9 \times 100 \text{ g}$
= 900 g .

14

Geometrical Concepts

Exercise-14

1. Colour the polygons that are triangles :

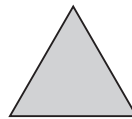
Ans. a.



b.



c.

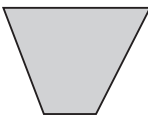


d.

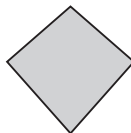


2. Colour the polygons blue that are quadrilateral :

Ans. a.



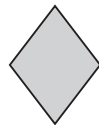
b.



c.



d.



3. Draw a irregular polygon that has nine sides. Name the polygon.

Ans.



Nonagone

4. Fill in the blanks :

- Ans. a. The simple closed curve made up of only line segments is called a **Polygon**.
- b. A polygon made up of only three line segments is called a **triangle**.
- c. **Square** and **rectangle** are examples of quadrilateral.
- d. A **heptagon** is a polygon with seven sides.

MCQs

Tick (✓) the correct option :

1. Closed figure is :



(iii)

c.(iii)

2. Hexagon has _____ sides :

c. 6

3. Scalene triangles has _____ sides equal :

c. No

4. Nonagon has _____ sides :

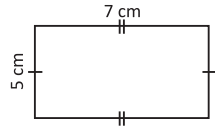
c. 9

15

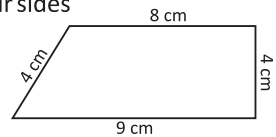
Perimeter of Rectilinear Figure

Exercise-15.1

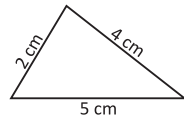
1. (a) Perimeter of rectangle = $2(l + b)$
= $2(7 \text{ cm} + 5 \text{ cm})$
= $2 \times 12 \text{ cm}$
= **24 cm.**



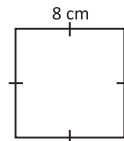
- (b) Perimeter of given quadrilateral = Sum of all four sides
= $8 \text{ cm} + 4 \text{ cm} + 9 \text{ cm} + 4 \text{ cm}$
= **25 cm.**



- (c) Perimeter of given triangle = Sum of all three sides
= $2 \text{ cm} + 4 \text{ cm} + 5 \text{ cm}$
= **11 cm.**



- (d) Perimeter of square = $4 \times \text{side}$
= $4 \times 8 \text{ cm}$
= **32 cm.**



2. (a) Sides of triangle = 6 cm, 7 cm and 8 cm
 \therefore Perimeter of a triangle = Sum of all three sides
 $= 6 \text{ cm} + 7 \text{ cm} + 8 \text{ cm}$
 $= \mathbf{21 \text{ cm.}}$
- (b) Sides of a triangle = 9 cm, 4 cm and 7 cm
 \therefore Perimeter of a triangle = Sum of all three sides
 $= 9 \text{ cm} + 4 \text{ cm} + 7 \text{ cm}$
 $= \mathbf{20 \text{ cm.}}$
3. (a) Sides of a quadrilateral = 4 cm, 6 cm, 3 cm and 2 cm
 \therefore Perimeter of quadrilateral = Sum of all four sides
 $= 4 \text{ cm} + 6 \text{ cm} + 3 \text{ cm} + 2 \text{ cm}$
 $= \mathbf{15 \text{ cm.}}$
4. (a) Length of a rectangle = 10 cm, Breadth of rectangle = 6 cm
 \therefore Perimeter of rectangle = $2(l + b)$
 $= 2(10 \text{ cm} + 6 \text{ cm})$
 $= 2 \times 16 \text{ cm} = \mathbf{32 \text{ cm.}}$
- (b) Length of a rectangle = 8 cm, Breadth of rectangle = 5 cm
 \therefore Perimeter of rectangle = $2(l + b)$
 $= 2(8 \text{ cm} + 5 \text{ cm})$
 $= 2 \times 13 \text{ cm} = \mathbf{26 \text{ cm.}}$
5. (a) Side of a square = 2 cm
 \therefore Perimeter of square = $4 \times \text{side}$
 $= 4 \times 2 \text{ cm}$
 $= \mathbf{8 \text{ cm.}}$
- (b) Side of a square = 4 cm
 \therefore Perimeter of square = $4 \times \text{side}$
 $= 4 \times 4 \text{ cm}$
 $= \mathbf{16 \text{ cm.}}$
- (c) Side of a square = 3 cm
 \therefore Perimeter of square = $4 \times \text{side}$
 $= 4 \times 3 \text{ cm}$
 $= \mathbf{12 \text{ cm.}}$
- (d) Side of a square = 7 cm
 \therefore Perimeter of square = $4 \times \text{side}$
 $= 4 \times 7 \text{ cm}$
 $= \mathbf{28 \text{ cm.}}$
6. Perimeter of a rectangle = 26 cm
 And, length of the rectangle = 9 cm
 \therefore Perimeter = $2(l + b)$
 \therefore $26 \text{ cm} = 2(9 \text{ cm} + b)$
 $26/2 \text{ cm} = 9 \text{ cm} + b$
 $13 \text{ cm} - 9 \text{ cm} = b$
 $b = \mathbf{4 \text{ cm.}}$
- Hence, the breadth of the rectangle is 4 cm.
7. Side of a square = 6 cm
 So, perimeter of the square = $4 \times \text{side}$
 $= 4 \times 6 \text{ cm} = \mathbf{24 \text{ cm.}}$
8. Perimeter of a square = 36 cm
 So, the length of side of the square = $1/4 \times \text{perimeter}$
 $= 1/4 \times 36 \text{ cm} = \mathbf{9 \text{ cm.}}$

9. Sides of a rectangle = 7 cm and 5 cm
 So, the perimeter of rectangle = $2(l + b)$
 $= 2(7 \text{ cm} + 5 \text{ cm})$
 $= 2 \times 12 \text{ cm} = \mathbf{24 \text{ cm.}}$
10. Perimeter of a rectangle = 24 cm
 And, length of rectangle = 8 cm
 \therefore Perimeter = $2(l + b)$
 \therefore
 $24 \text{ cm} = 2(8 \text{ cm} + b)$
 $24/2 \text{ cm} = 8 \text{ cm} + b$
 $12 \text{ cm} - 8 \text{ cm} = b$
 $\mathbf{b = 4 \text{ cm.}}$
 Hence, the breadth of the rectangle is 4 cm.
11. Sides of a triangle = 6 cm, 4 cm and 6 cm
 So, the perimeter of the triangle = Sum of all three sides
 $= 6 \text{ cm} + 4 \text{ cm} + 6 \text{ cm}$
 $= \mathbf{16 \text{ cm.}}$
12. Perimeter of a square = 48 cm
 So, the length of each side of square = $1/4 \times$ perimeter
 $= 1/4 \times 48 \text{ cm}$
 $= \mathbf{12 \text{ cm.}}$

Exercise-15.2

1. Length of a playground = 100 m
 And, breadth of the playground = 30 m
 \therefore Perimeter of playground = $2(l + b)$
 $= 2(100 \text{ m} + 30 \text{ m})$
 $= 2 \times 130 \text{ m} = \mathbf{260 \text{ m}}$
 Hence, 260 metre long wire is needed to fence the playground.
2. Length of a frame of a picture = 40 cm
 And, breadth of frame = 25 cm
 \therefore Perimeter of frame = $2(l + b)$
 $= 2(40 \text{ cm} + 25 \text{ cm})$
 $= 2 \times 65 \text{ cm} = \mathbf{130 \text{ cm}}$
 Hence, Ramesh need 130 meter of wooden stick to make the frame.
3. Each side of triangular park = 30 m
 Perimeter of park = $3 \times$ side
 $= 3 \times 30 \text{ m} = \mathbf{90 \text{ m}}$
 Distance covered by the girl in one step = 60 cm
 Total number of steps of the girl = $\frac{90 \times 100 \text{ cm}}{60 \text{ cm}}$
 $= 15 \times 10 = \mathbf{150}$
 Hence, the girl take 150 steps to walk arund the park.

4. Length of carpet = 5 m 20 cm = 520 cm
 And, breadth of carpet = 3 m 20 cm = 320 cm
 \therefore Perimeter of carpet = $2(l + b)$
 $= 2(520 \text{ cm} + 320 \text{ cm})$
 $= 2 \times 840 \text{ cm} = 1680 \text{ cm}$
 Cost of tape = ₹ 2 per metre

So, the total cost of required tape = ₹ $2 \times \frac{1680}{100} = ₹ 3360$


Hence, 1680 cm of tape is required to bounded the edge of carpet and the cost of the tape is ₹ **33.60**.

5. Length of the hard board = 175 cm
 And, breadth of the hard board = 85 cm
 \therefore Perimeter of the board = $2(l + b)$
 $= 2(175 \text{ cm} + 85 \text{ cm})$
 $= 2 \times 260 \text{ cm} = \mathbf{520 \text{ cm}}$

Hence, 520 cm long tape is required to cover the boundary of the board.

MCQs

Tick (✓) the correct option :

1. Fence required for  4 m is :
 a. 20 m
 b. 20 m
 c. $2(l + b)$
2. Perimeter of rectangle is :
 a. $2(l + b)$
 b. $2(l + b)$
 c. $4 \times \text{side}$
3. Perimeter of square is :
 a. $4 \times \text{side}$
 b. $4 \times \text{side}$
 c. $4 \times \text{side}$
4. If perimeter of a square is 40 m then its side is :
 a. 10 m
 b. 10 m
 c. 10 m

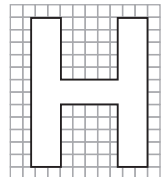
16

Area

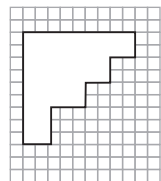
Exercise-16.1

Find the area of the following figures in sq cm :

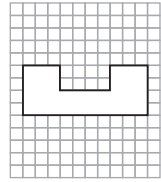
- Ans. a. Number of complete squares = 58
 And, number of half squares = 22
 So, the area of given figure = $[58 + 1/2 \times 22]$ sq. cm
 $= [58 + 11] = \mathbf{69 \text{ sq. cm.}}$



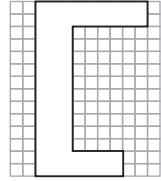
- b. Number of complete squares = 48
 And, number of half squares = 0
 So, the area of given figure = $[48 + 1/2 \times 0]$ sq. cm
 $= [48 + 0] = \mathbf{48 \text{ sq. cm.}}$



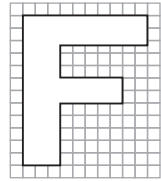
- c. Number of complete squares = 32
 And, number of half squares = 0
 So, the area of given figure = $[32 + 1/2 \times 0]$ sq. cm
 $= [32 + 0] = \mathbf{32 \text{ sq. cm.}}$



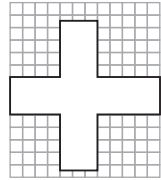
- d. Number of complete squares = 62
 And, number of half squares = 0
 So, the area of given figure = $[62 + 1/2 \times 0]$ sq. cm
 $= [62 + 0] = \mathbf{62 \text{ sq. cm.}}$



- e. Number of complete squares = 60
 And, number of half squares = 7
 So, the area of the given figure = $[60 + 1/2 \times 7]$ sq. cm
 $= [60 + 3.5] = \mathbf{63.5 \text{ sq. cm.}}$



- f. Number of complete squares = 60
 And, number of half squares = 6
 So, the area of the given figure = $[60 + 1/2 \times 6]$ sq. cm
 $= [60 + 3] = \mathbf{63 \text{ sq. cm.}}$



Exercise-16.2

1. Complete the following table in respect of a rectangle :

Length	Breadth	Area
a. 16 cm	2 cm	32 cm²
b. 10 cm	8 cm	80 cm²
c. 12 cm	3 cm	36 cm ²
d. 15 cm	2.5 cm	37.5 cm²
e. 6.4 cm	5 cm	32 cm ²
f. 9 cm	4 cm	36 cm ²

2. Length of a rectangle = 28 cm
 And, breadth of rectangle = 120 mm = 12 cm
 So, the area of the rectangle = $l \times b$
 $= 28 \text{ cm} \times 12 \text{ cm}$
 $= 336 \text{ sq. cm.}$
3. The side of a square = 70 cm
 So, the area of the square = side \times side
 $= 70 \text{ cm} \times 70 \text{ cm}$
 $= 4900 \text{ sq. cm.}$

4. The area of a rectangular region = 560 cm^2

And, the length of the rectangle = 20 cm

$$\therefore \text{Area} = l \times b$$

$$\therefore 560 \text{ cm}^2 = 20 \text{ cm} \times b$$

$$b = 560/20 \text{ cm} = 28 \text{ cm}$$

Hence, the breadth of the rectangle is 28 cm .

5. Length of rectangular field = 45 metre

And, the breadth of rectangular field = $15 \text{ metre less than length}$

$$= (45 - 15) \text{ m}$$

$$= 30 \text{ metre}$$

$$\therefore \text{Area of the rectangular field} = l \times b$$

$$= 45 \text{ m} \times 30 \text{ m}$$

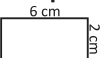
$$= 1350 \text{ sq. m.}$$

Cost of turfing = ₹ 1 per sq. m.


So, the cost of turfing at rectangular field = ₹ $1 \times 1350 = ₹ 1350$.

MCQs

Tick (✓) the correct option :

1. Area of  is equal to :

c. 12 cm^2

2. Area of  is equal to :

c. 16 cm^2

3. Area of rectangle is :

a. $l \times b$

4. Area of square is :

b. $\text{side} \times \text{side}$

5. If area of rectangle is 24 cm^2 and length is 6 cm , its breadth is :

c. 4 cm

17

Symmetry

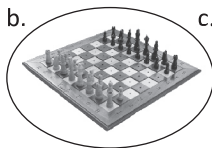
Exercise-17

1. Which of the following objects are symmetric? Circle them :

Ans. a.



b.

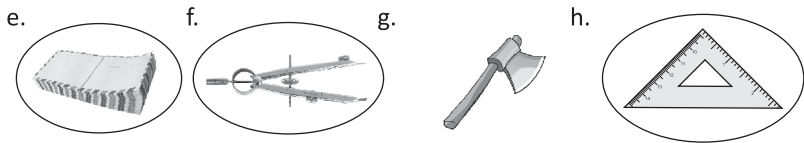


c.

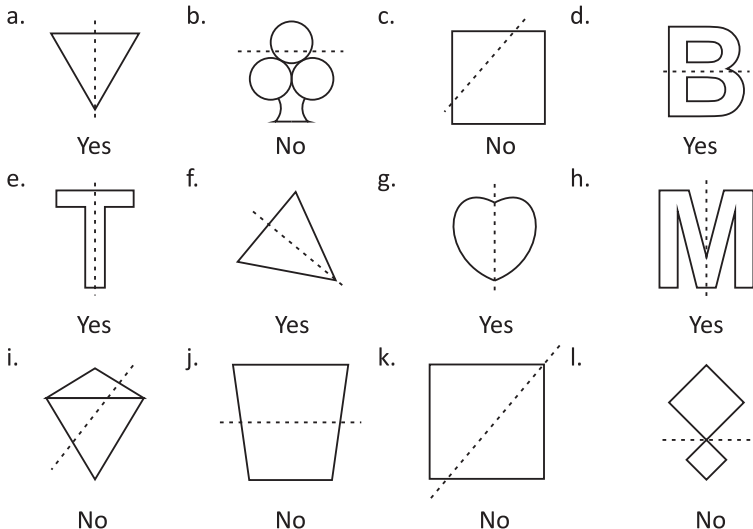


d.

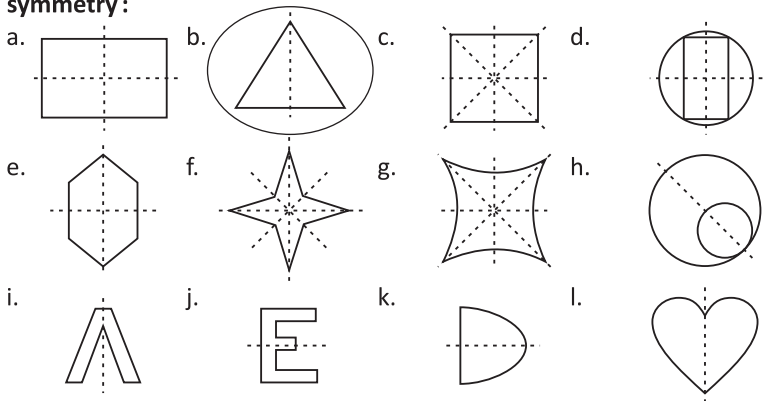




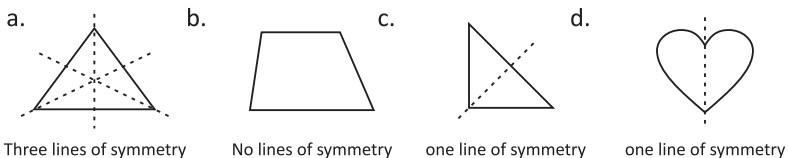
2. Is the dotted line a line of symmetry? Answer in 'yes' or 'no' :



3. Copy the following figures in each case in your notebooks. Draw lines of symmetry :

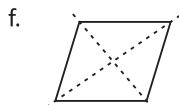


4. Write the number of lines of symmetry for each figure :

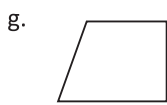




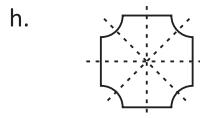
One line of symmetry



Two lines of symmetry



No lines of symmetry



Four lines of symmetry

MCQs

Tick (✓) the correct option :

- Indian flag have _____ lines of symmetry.
a. 1
- Letter A have _____ lines of symmetry.
a. 1
- Rectangle have _____ lines of symmetry.
b. 2
- Equilateral triangle have _____ lines of symmetry.
c. 3
- Letter F have _____ lines of symmetry.
a. 0

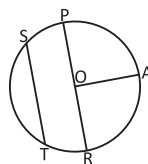
18

Circle

Exercise-18

1. In the figure given below name the parts of the circle :

- Ans. O = Centre
 PAR = Arc
 POR = Diameter
 ST = Chord
 OA = Radius
 PO = Radius
 PSTR = Arc



2. Draw a circle in your notebook and mark on it the parts of a circle.

Ans. Do it yourself

3. Find the radius of the circle whose diameter is :

Ans. a. Diameter of a circle = 20 cm

$$\begin{aligned} \therefore \text{Radius of the circle} &= \text{Diameter}/2 \\ &= 20/2 \text{ cm} = \mathbf{10 \text{ cm.}} \end{aligned}$$

b. Diameter of a circle = 30.5 cm

$$\begin{aligned} \therefore \text{Radius of the circle} &= \text{Diameter}/2 \\ &= 30.5/2 \text{ cm} = \mathbf{15.25 \text{ cm.}} \end{aligned}$$

c. Diameter of a circle = 20.70 cm
 \therefore Radius of the circle = Diameter/2
 $= 20.70/2 \text{ cm} = \mathbf{10.35 \text{ cm.}}$

d. Diameter of a circle = 40 cm
 \therefore Radius of the circle = Diameter/2
 $= 40/2 \text{ cm} = \mathbf{20 \text{ cm.}}$

4. Find the diameter of the circle whose radius is :

Ans. a. Radius of a circle = 4 cm
 \therefore Diameter of the circle = $2 \times$ Radius
 $= 2 \times 4 \text{ cm} = \mathbf{8 \text{ cm.}}$

b. Radius of a circle = 6.7 cm
 \therefore Diameter of the circle = $2 \times$ Radius
 $= 2 \times 6.7 \text{ cm} = \mathbf{13.4 \text{ cm.}}$

c. Radius of a circle = 3.9 cm
 \therefore Diameter of the circle = $2 \times$ Radius
 $= 2 \times 3.9 \text{ cm} = \mathbf{7.8 \text{ cm.}}$

d. Radius of a circle = 8.8 cm
 \therefore Diameter of the circle = $2 \times$ Radius
 $= 2 \times 8.8 \text{ cm} = \mathbf{17.6 \text{ cm.}}$

5. Find the circumference of the circle whose diameter is :

Ans. a. Diameter of a circle = 42 cm
 \therefore Circumference of the circle = $\pi \times$ diameter
 $= 22/7 \times 42 \text{ cm}$
 $= (22 \times 6) \text{ cm} = \mathbf{132 \text{ cm.}}$

b. Diameter of a circle = 21 cm
 \therefore Circumference of the circle = $\pi \times$ diameter
 $= 22/7 \times 21 \text{ cm}$
 $= (22 \times 3) \text{ cm} = \mathbf{66 \text{ cm.}}$

c. Diameter of a circle = 14 cm
 \therefore Circumference of the circle = $\pi \times$ diameter
 $= 22/7 \times 14 \text{ cm}$
 $= (22 \times 2) \text{ cm} = \mathbf{44 \text{ cm.}}$

d. Diameter of a circle = 28 cm
 \therefore Circumference of the circle = $\pi \times$ diameter
 $= 22/7 \times 28 \text{ cm}$
 $= (22 \times 4) \text{ cm} = \mathbf{88 \text{ cm.}}$

6. Find the diameter of the circle whose circumference is :

Ans. a. Circumference of a circle = 22 cm
 $\therefore \pi \times$ Diameter = 22 cm
 $D = \frac{22}{\pi} \text{ cm} = 22 \times 7/22 = 7 \text{ cm}$

So, the diameter of the circle is 7 cm.

b. Circumference of a circle = 44 cm

$$\therefore \pi \times \text{Diameter} = 44 \text{ cm}$$

$$D = \frac{44}{\pi} \text{ cm}$$

$$= 44 \times \frac{7}{22} \text{ cm} = (2 \times 7) = 14 \text{ cm}$$

Hence, the diameter of the circle is 14 cm.

c. Circumference of a circle = 66 cm

$$\therefore \pi \times \text{Diameter} = 66 \text{ cm}$$

$$D = \frac{66}{\pi} \text{ cm} = 66 \times \frac{7}{22} = 21 \text{ cm}$$

Hence, the diameter of the circle is 21 cm.

d. Circumference of a circle = 88 cm

$$\therefore \pi \times \text{Diameter} = 88 \text{ cm}$$

$$D = \frac{88}{\pi} \text{ cm}$$

$$= 88 \times \frac{7}{22} \text{ cm} = (4 \times 7) = 28 \text{ cm}$$

Hence, the diameter of the circle is 28 cm.

7. Diameter of a circle is the longest chord of a circle.

MCQs

Tick (✓) the correct option :

1. Diameter is the _____ chord of the circle.

b. longest

2. If diameter = 5 cm, radius is = _____ cm :

b. 2.5

3.  AB is _____ :

c. diameter

19

Time

Exercise-19.1

1. Draw hands in the clock to show the indicated time :

Ans. a. 9 : 20



b. 7 : 35



c. 12 : 50



d. 3 : 10



2. Write the time in figures :

Ans. a. Half past four = 4 : 30

b. Four fifty = 4 : 50

c. Five minutes past two = 2 : 05

d. Quarter to ten = 9 : 45

- e. Quarter past three = **3 : 15** f. Three fifty-five = **3 : 55**

3. Fill in the blanks :

- Ans.** a. The long hand of the clock is the **minute** hand.
b. The short hand of the clock is the **hour** hand.
c. The hour-hand takes **7** hours to move from 2 to 9.
d. The minute-hand takes **10** minutes to move from 3 to 5.
e. The hour-hand takes **4** hours to move from 2 to 6.
f. The minute-hand takes **20** minutes to move from 1 to 5.

4.

Ans. There are 60 minutes in 1 hour.

5.

Ans. The hour-hand completes one round of the dial in 12 hours.

Exercise-19.2

1. Write the times in am or pm :

- Ans.** a. 5:30 in the evening = **5:30 pm** b. 11:05 in the morning = **11:05 am**
c. 3:30 in the morning = **3:30 am** d. 7:15 in the evening = **7:15 pm**

2. Write the time for the following questions :

Ans. Do it yourself

3. What time was it before 3 hours?

- Ans.** a. $8:40 \text{ pm} - 3 \text{ hrs} = \mathbf{5:40 \text{ pm}}$ b. $5:40 \text{ am} - 3 \text{ hrs} = \mathbf{2:40 \text{ am}}$
∴ Time before 3 hours was **5:40 pm**. ∴ Time before 3 hours was **2:40 am**.
c. $12 \text{ midnight} - 3 \text{ hrs} = \mathbf{9:00 \text{ pm}}$ d. $7:30 \text{ pm} - 3 \text{ hrs} = \mathbf{4:30 \text{ pm}}$
∴ Time before 3 hours was **9:00 pm**. ∴ Time before 3 hours was **4:30 pm**.
e. $8:50 \text{ pm} - 3 \text{ hrs} = \mathbf{5:50 \text{ pm}}$
∴ Time before 3 hours was **5:50 pm**.

4. What time will it be after 5 hours?

- Ans.** a. $4:35 \text{ am} + 5 \text{ hrs} = \mathbf{9:35 \text{ am}}$ b. $11:00 \text{ am} + 5 \text{ hrs} = \mathbf{4:00 \text{ pm}}$
Time after 5 hours will **9:35 am**. Time after 5 hours will **9:35 am**.
c. $1:45 \text{ am} + 5 \text{ hrs} = \mathbf{6:45 \text{ am}}$ d. $6:50 \text{ am} + 5 \text{ hrs} = \mathbf{11:50 \text{ am}}$
Time after 5 hours will **6:45 am**. Time after 5 hours will **11:50 am**.

Exercise-19.3

1. Change these times according to 24-hour clock :

- Ans.** a. $6:30 \text{ pm} = \mathbf{1830 \text{ hours}}$ ($6 + 12 = 18$) b. $1:15 \text{ am} = \mathbf{0115 \text{ hours}}$
c. $6:00 \text{ pm} = \mathbf{1800 \text{ hours}}$ ($6 + 12 = 18$) d. $11:38 \text{ am} = \mathbf{1138 \text{ hours}}$
e. $12:00 \text{ midnight} = \mathbf{0000 \text{ hours}}$ or **2400 hours**
f. $10:15 \text{ pm} = \mathbf{2215 \text{ hours}}$ ($10 + 12 = 22$)

2. Change these times according to 12 hour clock :

- Ans.** a. $1210 \text{ hours} = \mathbf{12:10 \text{ pm}}$ b. $1445 \text{ hours} = \mathbf{2:45 \text{ pm}}$ ($14 - 12 = 2$)
c. $2145 \text{ hours} = \mathbf{9:45 \text{ pm}}$ ($21 - 12 = 9$) d. $600 \text{ hours} = \mathbf{6:00 \text{ am}}$
e. $1805 \text{ hours} = \mathbf{6:05 \text{ pm}}$ ($18 - 12 = 6$) f. $7:10 \text{ hours} = \mathbf{7:10 \text{ am}}$

3. As per the time table, Tamil Nadu Express leaves Chennai at 1950 hours. What is the time in 12-hour clock times?

Ans. Tamil Nadu Express leaves Chennai = at 1950 hours
So, this time in 12-hours clock = $19:50 (19 - 12 = 7)$
= 7:50 pm.

4. Answer, using both 12-hour clock and 24-hour clock times :

Ans. Do it yourself

5.

Ans. Scheduled time of aeroplane arrival at Mumbai = 1430 hours
But due to technical fault, the plane reach at Mumbai = 8:30 pm
Extra time taken by plane = 8:30 pm – 1430 hours
= 8:30 pm – 2:30 pm = 6 hours

Hence, the aeroplane take 6 hours more than scheduled time.

Exercise-19.4

1. Convert the following as directed :

Ans. a. 2 weeks 3 days 10 hours into 'hours'.

$$\begin{aligned} & (2 \times 7 \times 24) \text{ hours} + (3 \times 24) \text{ hours} + 10 \text{ hours} \\ & = (336 + 72 + 10) \text{ hours} \\ & = \mathbf{418 \text{ hours.}} \end{aligned}$$

b. 3 weeks 5 days 11 hours into 'hours'.

$$\begin{aligned} & = (3 \times 7 \times 24) \text{ hours} + (5 \times 24) \text{ hours} + 11 \text{ hours} \\ & = (504 + 120 + 11) \text{ hours} \\ & = \mathbf{635 \text{ hours.}} \end{aligned}$$

c. 4 weeks 6 days 4 hours into 'hours'.

$$\begin{aligned} & = (4 \times 7 \times 24) \text{ hours} + (6 \times 24) \text{ hours} + 4 \text{ hours} \\ & = (672 + 144 + 4) \text{ hours} \\ & = \mathbf{820 \text{ hours.}} \end{aligned}$$

d. 2 days 5 hours 6 minutes into 'minutes'.

$$\begin{aligned} & = (2 \times 24 \times 60) \text{ min} + (5 \times 60) \text{ min} + 6 \text{ min} \\ & = (2880 + 300 + 6) \text{ minutes} \\ & = \mathbf{3186 \text{ minutes.}} \end{aligned}$$

e. 5 days 7 hours 26 minutes into 'minutes'.

$$\begin{aligned} & = (5 \times 24 \times 60) \text{ min} + (7 \times 60) \text{ min} + 26 \text{ min} \\ & = (7200 + 420 + 26) \text{ minutes} \\ & = \mathbf{7646 \text{ minutes.}} \end{aligned}$$

f. 7 hours 23 minutes 25 seconds into 'seconds'.

$$\begin{aligned} & = (7 \times 60 \times 60) \text{ sec} + (23 \times 60) \text{ sec} + 25 \text{ sec} \\ & = (25200 + 1380 + 25) \text{ seconds} \\ & = \mathbf{26605 \text{ seconds.}} \end{aligned}$$

2. Convert the following into seconds :

Ans. a. 15 min 25 sec

$$\begin{aligned} & = (15 \times 60) \text{ sec} + 25 \text{ sec} \\ & = 900 \text{ sec} + 25 \text{ sec} \\ & = \mathbf{925 \text{ seconds.}} \end{aligned}$$

b. 45 min 55 sec

$$\begin{aligned} & = (45 \times 60) \text{ sec} + 55 \text{ sec} \\ & = 2700 \text{ sec} + 55 \text{ sec} \\ & = \mathbf{2755 \text{ seconds.}} \end{aligned}$$

c. 2 hr 30 min 30 sec
 $= (2 \times 60 \times 60) \text{ sec} + (30 \times 60) \text{ sec} + 30 \text{ sec}$
 $= 7200 \text{ sec} + 1800 \text{ sec} + 30 \text{ sec}$
= 9030 seconds.

e. 4 hr 40 min 36 sec
 $= (4 \times 60 \times 60) \text{ sec} + (40 \times 60) \text{ sec} + 36 \text{ sec}$
 $= 14400 \text{ sec} + 2400 \text{ sec} + 36 \text{ sec}$
= 16836 seconds.

d. 25 min 15 sec
 $= (25 \times 60) \text{ sec} + 15 \text{ sec}$
 $= 1500 \text{ sec} + 15 \text{ sec}$
= 1515 seconds.

f. 55 min 10 sec.
 $= (55 \times 60) \text{ sec} + 10 \text{ sec}$
 $= 3300 \text{ sec} + 10 \text{ sec}$
= 3310 seconds.

3. Convert the following into months :

Ans. a. 12 years
 $= (12 \times 12) \text{ months}$
= 144 months.

c. 4 years 3 months
 $= (4 \times 12) \text{ months} + 3 \text{ months}$
 $= (48 + 3) \text{ months}$
= 51 months.

e. 6 years 7 months
 $= (6 \times 12) \text{ months} + 7 \text{ months}$
 $= (72 + 7) \text{ months}$
= 79 months.

b. 20 years
 $= (20 \times 12) \text{ months}$
= 240 months.

d. 10 years 17 months
 $= (10 \times 12) \text{ months} + 17 \text{ months}$
 $= (120 + 17) \text{ months}$
= 137 months.

f. 11 years 20 months
 $= (11 \times 12) \text{ months} + 20 \text{ months}$
 $= (132 + 20) \text{ months}$
= 152 months.

Exercise-19.5

1. Find the sum of :

Ans. a. 9 years 9 months and 6 years 6 months.

years	months
9	09
+ 6	06
16	03

b. 5 months 6 days and 7 months 8 days.

months	days
5	06
+ 7	08
12	14

c. 8 hours 50 minutes and 5 hours 30 minutes.

hours	minutes
8	50
+ 5	30
14	20

d. 19 minutes 45 seconds and 18 minutes 35 seconds.

minutes	seconds
①①	①
19	45
+ 18	35
38	20

e. 12 years 10 months and 18 years 6 months.

years	months
①①	
12	10
+ 18	06
31	04

f. 3 hours 30 minutes 30 seconds and 4 hours 40 minutes 40 seconds.

hour	minutes	seconds
①	①	
3	30	30
+ 4	40	40
8	11	10

2.

Ans. A train leaves Meerut = at 18:05 hours

And, the train reaches Saharanpur = After 2 hours 45 minutes

$$\therefore 18:05 \text{ hours} \xrightarrow{2 \text{ hrs}} 20:05 \text{ hours} \xrightarrow{45 \text{ min}} 20:50 \text{ hours}$$

Hence, the train reaches Saharanpur at 20:50 hours or 8:50 pm

3.

Ans. Starting time of John's school = at 8:30 am

And, school remains open = for 5 hours 15 minutes

$$\therefore 8:30 \text{ am} \xrightarrow{5 \text{ hrs}} 1:30 \text{ pm} \xrightarrow{15 \text{ min}} 1:45 \text{ pm}$$

Hence, John's school closes at 1:45 pm.

4.

Ans. Mr Ravi went to Delhi = on April 9th, 2007

And, he returned home = on August 21st, 2007

Number of days in April = (30 - 8) = 22 days

Number of days in May = 31 days

Number of days in June = 30 days

Number of days in July = 31 days

Number of days in August = 20 days

$$\therefore \text{Total number of days} = (22 + 31 + 30 + 31 + 20) \text{ days} = 134 \text{ days}$$

Hence, Mr Ravi stays 134 days at Delhi.

5.

Ans. High school examination started = on March 10th

And, examination ended = on April 12th

$$\begin{aligned} \therefore \text{Time duration of examination} &= (31 - 9) \text{ days} + 12 \text{ days} \\ &= 22 + 12 = 34 \text{ days} \end{aligned}$$

Hence, the examination take 34 days.

Exercise-19.6

1. Find the difference of :

Ans. a. 8 year 2 months and 5 years 10 months.

years	months
8	2
-5	10
2	04

b. 7 months 25 days and 4 months 3 days.

months	days
7	25
-4	3
3	22

c. 18 hours 15 minutes and 6 hours 50 minutes.

hours	minutes
18	15
-6	50
11	25

d. 30 minutes 10 seconds and 20 minutes 50 seconds.

minutes	seconds
30	10
-20	50
9	20

2.

Ans. An aeroplane leaves Delhi = at 0430 hours

And, aeroplane arrives Mumbai = at 0715 hours

$$\therefore 0430 \text{ hours} \xrightarrow{+45 \text{ min}} 0515 \text{ hours} \xrightarrow{+2 \text{ hrs}} 0715 \text{ hours}$$

Total time taken = 2 hours 45 minutes

Hence, the aeroplane reaches Mumbai from Delhi in 2 hours 45 minutes.

3.

Ans. Sun rises in June = at 8:20 am

And, the sun sets = at 7:30 pm

\therefore 8:20 am $\xrightarrow{+11 \text{ hrs}}$ 7:20 pm $\xrightarrow{+10 \text{ min}}$ 7:30 pm

\therefore Time duration = 11 hrs 10 minutes

Hence, the length of the day is 11 hours 10 minutes.

4.

Ans. Mr Ravi's office opens = at 9:45 am

And, his office closes = at 5 pm

\therefore 9:45 am $\xrightarrow{+15 \text{ min}}$ 10:00 am $\xrightarrow{+7 \text{ hrs}}$ 5:00 pm

\therefore Time duration = 7 hours 15 minutes

Hence, Mr Ravi's office remains 7 hours 15 minutes open.

5.

Ans. Miss Renu went to school = at 7:30 am

And, she reached back her home = at 1445 hours = at 2:45 pm

\therefore 7:30 am $\xrightarrow{+15 \text{ min}}$ 7:45 am $\xrightarrow{+7 \text{ hours}}$ 2:45 pm

\therefore Total time duration = 7 hours 15 minutes

Hence, Miss Renu remains 7 hours 15 minutes out of her house.

MCQs

Tick (✓) the correct option :

1. 1 week = _____ hours.
c. 168
2. In a day minute hand moves _____ times a clock.
c. 24
3. 20 : 30 means :
b. 8 : 30 pm
4. Convert in days 4 weeks and 2 days.
b. 30
5. Quater past 4 is :
b. 4 : 15








NEP Development of Traditional Knowledge

Below is Ajay's schedule at the school. Draw the hands on the clock to indicate the times and write the times below the clocks.

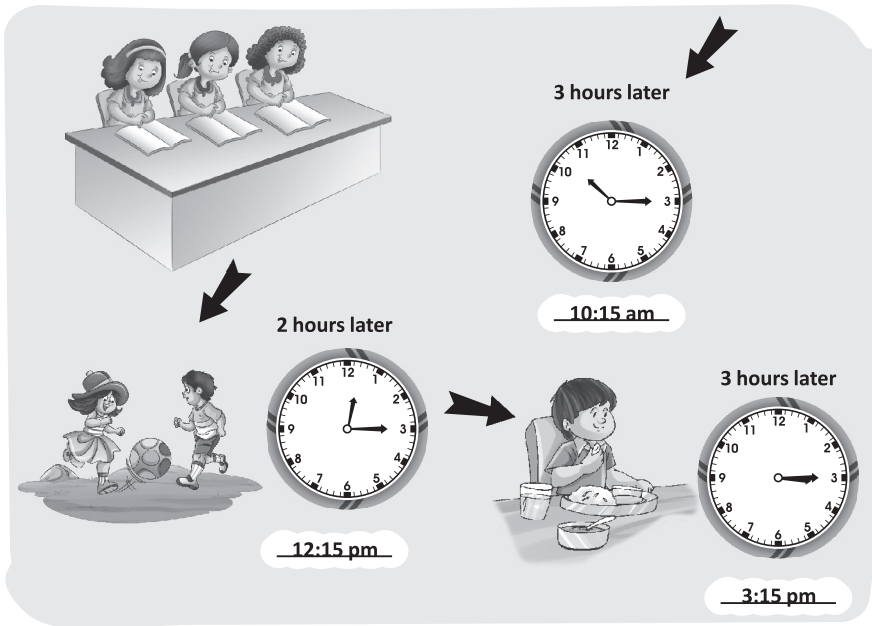
Starting Time

15 mins later



7:00 am

7:15 am



20

Patterns

Exercise-20.1

1. Complete the multiplication pairs given below :

Ans. $3 \times 3 = 9$ $7 \times 7 = 49$ $5 \times 5 = 25$ $9 \times 9 = 81$
 $2 \times 4 = 9 - 1 = 8$ $6 \times 8 = 49 - 1 = 48$ $4 \times 6 = 25 - 1 = 24$ $8 \times 10 = 81 - 1 = 80$

There is a pattern in the multiplication sums in each of the above pairs. Use the pattern and find out the following products without actual multiplication.

- a. If $18 \times 18 = 324$ then $17 \times 19 = 324 - 1 = 323$
 b. If $29 \times 29 = 841$ then $28 \times 30 = 841 - 1 = 840$
 c. If $45 \times 45 = 2025$ then $44 \times 46 = 2025 - 1 = 2024$
 d. If $57 \times 57 = 3249$ then $56 \times 58 = 3249 - 1 = 3248$
2. Three numbers when multiplied together gives the same answer as when they are added. What are these numbers?

Ans. $1 \times 2 \times 3 = 6$
 $1 + 2 + 3 = 6$

3. Study the pattern in each of the following and find the missing numbers :

- Ans. a. 0, 2, 4, 6, 8, 10, 12.
 b. 3, 6, 9, 12, 15, 18, 21, 24.
 c. 100, 92, 84, 76, 68, 60.
 d. 10, 15, 20, 25, 30, 35.

4.

Ans. (a) Divide the square into four equal parts so that the number in each part add up to 32 :

1	14	13	10
8	16	5	2
9	3	4	6
2	11	14	10

➔

1	14	13	10
8	9	5	4
16	3	2	6
2	11	14	10

(b) Fill in the empty boxes with numbers 1 to 9 so as to get answers given in the extreme right and bottom boxes follow the operation signs from the top to the bottom and from left to right :

2	×	4	+	1	=	9
+		+		×		
5	+	7	÷	6	=	2
×		-		+		
3	+	8	-	9	=	2
21		3		15		

5. Find out the sum of the odd numbers in each row using a pattern :

Ans. 1

3 5

7 9 11

13 15 17 19

21 23 25 27 29

31 33 35 37 39 41

43 45 47 49 51 53 55

- 1
- 8
- 27
- 64
- 125
- 216
- 343

6. Find out the following products in an easy way without written work :

Ans. a. $9 \times 11 = 100 - 1 = 99$ [Hint : $10 \times 10 = 100$; $100 - 1 = 99$]

b. $19 \times 21 = 400 - 1 = 399$

c. $29 \times 31 = 900 - 1 = 899$

d. $39 \times 41 = 1600 - 1 = 1599$

7. An astronaut who went to Mars found numbers written there as follows:

Ans.

for 16

for 25

for 32

for 9

How would the Martians (people on Mars) write :

a. $52 =$

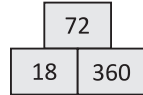
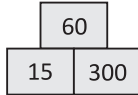
b. $17 =$

c. $45 =$

d. $23 =$

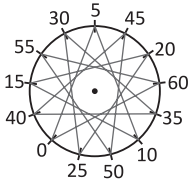
8. Find out the patterns and fill in the boxes :

Ans.

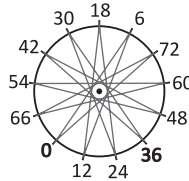


9. Draw lines joining the multiples in order. Start from 0 and finish also at 0 :

Ans. (a) Multiples of 5



(b) Multiples of 6



Colour all the triangles' and quadrilaterals you get in the above two patterns using different colours.

Ans. Do it yourself

10. Study the pattern and extend it by two steps :

Ans.

111	÷	3	=	37
222	÷	6	=	37
333	÷	9	=	37
444	÷	12	=	37
555	÷	15	=	37
666	÷	18	=	37

11. Study the pattern in multiplications given below :

Ans.

1	×	1	=	1
11	×	11	=	121
111	×	111	=	12321
1111	×	1111	=	1234321

Find the rule and use it to find next two multiplications.

11111	×	11111	=	123454321
111111	×	111111	=	12345654321

MCQs

Tick (✓) the correct option :

- Next term of 5, 11, 18, 26, _____ :
a. **35**
- Next term of : 1, 3, 5, 7, 9, _____ :
a. **11**
- Study the pattern and write next term :

	×		=	1
	×		=	121
	×		=	12321
	×		=	1234321

$$||||| \times ||||| = \underline{\hspace{2cm}}$$

a. **123454321**

4. Study the pattern and write next term :

$$(2 \times 2) - (1 \times 1) = 2 + 1 = 3$$

$$(3 \times 3) - (2 \times 2) = 3 + 2 = 5$$

$$(9 \times 9) - (8 \times 8) = \underline{\hspace{2cm}}$$

c. **17**

5. Next term of 8, 16, 24, _____

c. **32**

21

Respresenting Data Pictorially

Exercise-21.1

1. The given pictograph shows various fruits available with a fruit seller.

Answer the questions that follow the pictograph :

Ans. a. The total number of fruits in the shop are

$$(1100 + 600 + 1100 + 1200) = 4000 \text{ fruits.}$$

b. He has 1100 mangoes and 1200 apples.

c. He has 1100 bananas and 600 guavas.

So, he has 500 more bananas than guavas.

d. Apples are maximum in number.

2. Answer the following questions through the given pictograph.

Ans. a. Class-IV gave ₹ 110, which is maximum amount.

b. Class-I gave ₹ 50, which is minimum amount.

c. Class-III gave ₹ 70 in total.

d. The total amount given by all the classes
is $(₹ 50 + ₹ 80 + ₹ 70 + ₹ 110 + ₹ 100) = ₹ 410$.

Exercise-21.2

A gun factory produces guns. The bar graph given here shows the number of guns produced in a particular week.

Answer the following questions :

Ans. a. Total number of guns produced in a week
is $(40 + 50 + 40 + 30 + 60 + 20) = 240$.

b. Maximum number of guns are produced
in Friday and the number of guns
produced in Friday = 60.

c. Minimum number of guns are produced
in Saturday and the number of guns
produced in Saturday = 20.

d. There are 50 guns produced on Tuesday.

