

## CHAPTER 2

# FRACTIONS AND DECIMALS

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### Points to Remember :

- The numbers of the form  $\frac{a}{b}$ , where  $a$  and  $b$  are whole numbers and  $b \neq 0$  are known as fractions. For example  $\frac{3}{5}$ ,  $\frac{17}{6}$ ,  $\frac{8}{1}$ .
- $\frac{3}{10}$ ,  $\frac{29}{100}$ ,  $\frac{39}{1000}$ ,  $\frac{423}{1000}$  are decimal fractions.
- $\frac{1}{2}$  of 2 is  $\frac{1}{2} \times 2 = 1$ .
- $2 \div \frac{3}{5} = 2 \times \frac{5}{3} = \frac{10}{3}$ ,  $\frac{2}{3} \div 7 = \frac{2}{3} \times \frac{1}{7} = \frac{2}{21}$ .
- $0.5 \times 0.7 = 0.35$ ,  $0.53 \times 10 = 5.3$ ,  $0.53 \times 100 = 53$ .

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### QUESTIONS

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1. Add :  $\frac{1}{7} + \frac{7}{9}$ .
2. Find the sum of  $\frac{7}{8}$ ,  $\frac{5}{6}$ , and  $\frac{3}{4}$ .
3. Find the sum :  $3\frac{3}{5} + 2\frac{1}{5} + 4\frac{1}{5}$ .
4. Simplify :  $8 - 4\frac{1}{2} - 2\frac{1}{2}$ .
5. What should be added to  $7\frac{4}{15}$  to get  $8\frac{2}{5}$ ?
6. A film show lasted for  $3\frac{2}{3}$  hours. Out of this,  $1\frac{1}{3}$  hours were spent on advertisements. What was the actual duration of the film?

7. Multiply :  $\frac{14}{25} \times \frac{35}{68} \times \frac{34}{49}$ .
8. Simplify :  $3\frac{4}{7} \times 2\frac{2}{5} \times 1\frac{3}{4}$ .
9. Find  $\frac{7}{8}$  of a kilogram.
10. Find  $\frac{4}{5}$  of an hour.
11. Simplify :  $\frac{12}{25} \times \frac{15}{28} \times \frac{35}{36}$ .
12. By what number should  $2\frac{3}{5}$  be multiplied to get  $1\frac{6}{7}$ ?
13. A carton contains 16 boxes of nails and each box weighs  $4\frac{3}{4}$  kg. How much would a carton of nails weigh?
14. Meena spends  $\frac{4}{5}$  of her income on household expenses. Her monthly income is Rs. 15,000. How much does she save?
15. Divide  $\frac{5}{9}$  by  $\frac{2}{3}$ .
16. Divide 45 by  $1\frac{4}{5}$ .
17. Solve :  $5\frac{3}{7} \div 2\frac{5}{7}$ .
18. Simplify :  $3\frac{3}{7} \div \frac{8}{21} \times \frac{1}{27}$ .
19. By what number should  $6\frac{2}{9}$  be divided to obtain  $4\frac{2}{3}$ ?
20. By what number should  $6\frac{2}{9}$  be multiplied to get 40?
21. Convert 0.75 into a fraction.
22. Convert  $\frac{17}{20}$  into a decimal.
23. Convert  $\frac{25}{8}$  into a decimal.
24. Find the place value of 2 in 48.032.

25. How much less is 58 km than 98.6 km?
26. Multiply :  $156.1 \times 1000$ .
27. Multiply :  $100.01 \times 1.1$ .
28. Subtract 6.732 from 7.
29. By how much should 32.67 be increased to make it 40.00?
30. What should be added to 63.58 to get 90?
31. Rohit purchased a notebook for Rs. 13.65, a pencil for Rs. 2.00 and a pen for Rs. 14.35. How much did he pay in all?
32. Sapna bought a shirt for Rs. 125.50 and a jeans for Rs. 550.75. She paid Rs. 1000 in all. How much money did she get back?
33. Each side of a square is 2.5m in length. Find the perimeter of the square.
34. A vehicle covers a distance 48 km in 2.4 litres of petrol. How much distance will it cover in a litre of petrol?
35. Divide 432.8 by 1000.
36. Find the value :  $30.94 \div 0.07$ .
37. Find the average of 4.2, 3.8 and 4.6.
38. Simplify :  $11.2 \times 0.15 \div \frac{4}{5}$ .
39. Simplify :  $5.43 \times 15 \div 5$ .
40. Simplify :  $0.089 \times 0.76 \div 0.19$ .
41. Total weight of some bags of wheat is 1743 kg. If each bag contains 49.8 kg. How many bags are there in all?
42. Shilpa cuts 25 metres of rope into pieces of 1.25 m each. How many pieces does she get?
43. The product of two decimals is 42.9870. If one of them is 12.46, find the other.
44. How many buckets of equal capacity can be filled from 850 litres of water, if each bucket has capacity of 8.5 litres?
45. Each side of a regular polygon of six sides is 3.5 cm in length. Find the perimeter of the polygon.
46. The product of two numbers is 2.56. If one of them is 1.6, find the other number.
47. Monika purchased 14.5 litres of refined oil for Rs. 290. Find the cost of one litre oil.
48. The cost of 20 pens is Rs. 298.80. Find the cost of one pen.
49. If the cost of a book is Rs. 75.50, find the cost of 50 such books.
50. If 1 kg of pure milk contains 0.245 kg of fat, how much fat is there in 100 kg of milk?

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## ANSWERS

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| 1. $\frac{58}{63}$ . | 2. $\frac{59}{24}$ .   |
| 3. 10                | 4. 1                   |
| 5. $1\frac{2}{15}$ . | 6. $2\frac{1}{3}$ hrs. |
| 7. $\frac{1}{5}$     | 8. 15                  |
| 9. 875 g             | 10. 48 min             |
| 11. $\frac{1}{4}$    | 12. $\frac{5}{7}$ .    |
| 13. 76 kg            | 14. Rs. 3000           |
| 15. $\frac{5}{6}$ .  | 16. 25                 |
| 17. 2.               | 18. $\frac{1}{3}$ .    |
| 19. $\frac{4}{3}$ .  | 20. $\frac{45}{7}$ .   |
| 21. $\frac{3}{4}$ .  | 22. 0.85               |
| 23. 3.125            | 24. $\frac{2}{1000}$ . |
| 25. 40.6             | 26. 156100             |
| 27. 110.011          | 28. 0.268              |
| 29. 7.33             | 30. 26.42              |
| 31. Rs. 30           | 32. Rs. 323.75         |
| 33. 10m              | 34. 20 km              |
| 35. 0.4328           | 36. 442                |
| 37. 4.2              | 38. 2.1                |
| 39. 16.29            | 40. 0.356              |
| 41. 35 Bags.         | 42. 20 pieces          |
| 43. 3.45             | 44. 100 buckets        |
| 45. 21 cm            | 46. 1.6                |
| 47. Rs. 20           | 48. Rs. 14.94          |
| 49. Rs. 3775         | 50. 24.5 kg.           |