

EXERCISE-01

Multiple Choice Questions

1. Simplify : $4 + 4.44 + 44.4 + 4.04 + 444$
 (1) 500.88 (2) 577.2
 (3) 495.22 (4) 472.88
2. Simplify : $6202.5 + 620.25 + 62.025 + 6.2025 + 0.62025$
 (1) 6800.47780 (2) 6819.59775
 (3) 6891.59775 (4) 6793.45975
3. Simplify : $685.59 - x = 607.88 - 351.46$
 (1) 449.28 (2) 419.17
 (3) 429.17 (4) 439.28
4. Simplify : $301.01 - 0.101 = x + 198.01$
 (1) 103.119 (2) 103.101
 (3) 102.901 (4) 102.899
5. The simplification of $2.002 + 7.9 \{2.8 - 6.3 (3.6 - 1.5) + 15.6\}$:
 (1) 0.002 (2) 4.2845
 (3) 40.843 (4) 42.845
6. Simplify : $\frac{7}{10}$
 (1) 7.1 (2) 1.7
 (3) 0.7 (4) 0.07
7. Simplify : $\frac{5}{100}$
 (1) 5.1 (2) 5.01
 (3) 0.5 (4) 0.05
8. Simplify : $\frac{9}{1000}$
 (1) 0.0009 (2) 0.009
 (3) 9.001 (4) None of these
9. Simplify : $\frac{16}{1000}$
 (1) 0.016 (2) 0.16
 (3) 0.0016 (4) 1.006
10. Simplify : $\frac{134}{1000}$
 (1) 13.4 (2) 1.34
 (3) 0.134 (4) 0.0134
11. Simplify : $2\frac{17}{100}$
 (1) 2.17 (2) 2.017
 (3) 0.217 (4) 21.7
12. Simplify : $4\frac{3}{100}$
 (1) 4.3 (2) 4.03
 (3) 4.003 (4) 43.10
13. Simplify : 6.25
 (1) $6\frac{1}{2}$ (2) $6\frac{1}{4}$
 (3) $62\frac{1}{2}$ (4) None of these
14. Simplify : $\frac{6}{25}$
 (1) 2.4 (2) 0.24
 (3) 0.024 (4) None of these
15. Simplify : $4\frac{7}{8}$
 (1) 4.78 (2) 4.87
 (3) 4.875 (4) None of these
16. Simplify: 24.8
 (1) $24\frac{4}{5}$ (2) $24\frac{2}{5}$
 (3) $24\frac{1}{5}$ (4) None of these
17. Simplify: $2\frac{1}{25}$
 (1) 2.4 (2) 2.04
 (3) 2.004 (4) None of these

18. Write in short form: $2 + \frac{3}{10} + \frac{4}{100}$
(1) 2.304 (2) 2.403
(3) 2.34 (4) None of these
19. Write in short form: $2 + \frac{6}{100}$
(1) 2.006 (2) 2.06
(3) 2.6 (4) None of these
20. Write in short form: $\frac{4}{100} + \frac{7}{10000}$
(1) 0.47 (2) 0.407
(3) 0.0407 (4) None of these

True or false

1. Every fraction with denominator 10 or multiples of 10 can be written in decimal notation.
2. Every decimal number having upto 2 decimal places can be written as a fraction with denominator 10 or 100.

3. Every decimal can not be represented on a number line.
4. A decimal number having more decimal places is greater than a decimal number having less decimal places.
5. Two decimals can be subtracted only if they have same decimal places.

Fill in the blanks

1. The decimal point comes between ones place and _____ place in a decimal number.
2. The place value of digit 2 in the number 6.802 is_____.
3. If a circle is divided into 100 equal parts then each part represents _____ of the whole circle.
4. 10.57 in expanded form is
5. 3 ones, 4 tenths, 0 hundredths and 1 thousandths in decimal form is _____.

ANSWER KEY

Multiple choice questions

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Answer	1	3	3	4	4	3	4	2	1	3	1	2	2	2	3
Question	16	17	18	19	20										
Answer	1	2	3	2	3										

True or false

1. True

2. True

3. False

4. False

5. False

Fill in the blanks

1. tenth

2. $\frac{2}{1000}$

3. 0.01

4. $10 + \frac{5}{10} + \frac{7}{100}$

5. 3.401

EXERCISE-02

Very short answer type questions

- Write each of the following in numbers.
 - Fifty-eight point six three
 - Seven point seven six
 - Four hundred four point zero four four
 - Point zero one five
- Write the place value of each digit in each of the following decimals.
 - 14.83
 - 46.075
 - 5370.34
- Write each of the following decimals in expanded form.
 - 67.83
 - 24.675
 - 8.006
- Write each of the following in decimal form.
 - $40 + 6 + \frac{7}{10} + \frac{9}{100}$
 - $700 + 30 + 1 + \frac{8}{10} + \frac{4}{100}$
 - $800 + 5 + \frac{8}{10} + \frac{6}{1000}$
- Convert each of the following into like decimals.
 - 7.5, 64.23, 0.074
 - 0.6, 5.937, 2.36, 4.2
 - 1.6, 0.07, 3.58, 2.9
 - 2.5, 0.63, 14.08, 1.637
- Arrange the following decimals in ascending order.
 - 5.8, 7.2, 5.69, 7.14, 5.06
 - 0.6, 6.6, 6.06, 66.6, 0.06
 - 6.54, 6.45, 6.4, 6.5, 6.05
 - 3.3, 3.303, 3.033, 0.33, 3.003
- Arrange the following decimals in descending order.
 - 7.3, 8.73, 73.03, 7.33, 8.073
 - 3.3, 3.03, 30.3, 30.03, 3.003
 - 2.7, 7.2, 2.27, 2.72, 2.02, 2.007
 - 8.88, 8.088, 88.8, 88.08, 8.008
- Convert each of the following into a fraction in its simplest form.
 - 0.9
 - 0.08
 - 0.48
 - 0.224
- Convert each of the following as a mixed fraction.
 - 16.5
 - 4.275
 - 7.004
- Convert each of the following into a decimal.
 - $\frac{21415}{1000}$
 - $3\frac{3}{5}$
 - $2\frac{19}{40}$
 - $\frac{19}{20}$
 - $\frac{107}{250}$
 - $\frac{7}{8}$
- Using decimals, express.
 - 8 kg 640 g in kilograms
 - 6 kg 8 g in kilograms
 - 4 km 365 m in kilometers
 - 270 m in kilometers
 - 35 m in kilometers
 - 15 kg 850 g in kilograms
 - Rs. 18 and 25 paise in rupees
 - 32 paise in rupees

Short answer type questions

- Add the following decimals.
 - 23.7, 106.94, 68.9 and 29.5
 - 18.6, 84.75, 8.345 and 9.7
 - 8.236, 16.064, 63.8 and 27.53

- 13.** Subtract :
- (i) 59.63 from 92.4
 - (ii) 127.237 from 216.2
 - (iii) 348.237 from 523.12
 - (iv) 39.875 from 70.68
 - (v) 205.35 m from 245.5 m
 - (vi) 2.059 m from 7.099 km
 - (vii) 3.250 kg from 10.750 kg
 - (viii) 3.515 litres from 8.5 litres
- 14.** What number added to 0.805 gives 1?
- 15.** What must be subtracted from 3 to get 2.642?
- 16.** By how much should 83.407 be decreased to get 27.78?
- Long answer type questions**
- 17.** Simplify the following.
- (i) $3.4 + 5 - 6.4$
 - (ii) $2.8 + 1.1 - 2.9$
 - (iii) $3 - 3.3 + 1.8$
 - (iv) $3.28 + 1.63 - 4.9$
 - (v) $2.36 - 3.24 + 2.18$
 - (vi) $6.7 + 3.21 - 7.463$
 - (vii) $48.93 + 50.05 + 10.007$
 - (viii) $63.368 + 21.732 - 35.1$
 - (ix) $2.67 - 1.787 + 1.878$
 - (x) $101.28 + 28.19 - 30.27$
- 18.** What is the difference of 3.14 and the sum of 5.99 and 0.65?
- 19.** What should be added to 99.099 to get 100?
- 20.** What should be subtracted from 102.57 to get the greatest 2-digit number?
- 21.** Varun scored 548.82 marks out of 700 in the final exam. how many marks did he lose?
- 22.** A tailor needs 55.80 m of cloth for the shirts and 69.25 m for trousers. How much cloth does the tailor need in all?
- 23.** Jame's height is 148.82 cm. She stands on a stool of height 10.50 cm. What is the combined height now?
- 24.** A cyclist has travelled 160.8 km in the first stage of a race, 165.65 km in the second stage and 196.31 km in the third. Find the total distance?
- 25.** In a well filled with water, 184.5 litres are removed followed by 128.75 litres and finally 84.5 litres. After these withdrawals, there are 160 litres in the well. How much water did the well originally have?

ANSWER KEY

Very short answer type questions

1. (i) 58.63 (ii) 7.76 (iii) 404.044 (iv) 0.015
2. (i) Place value of 1 = 10, Place value of 4 = 4, Place value of 8 = $\frac{8}{10}$, Place value of 3 = $\frac{3}{100}$
 (ii) Place value of 4 = 40, Place value of 6 = 6, Place value of 0 = 0, Place value of 7 = $\frac{7}{100}$,
 Place value of 5 = $\frac{5}{1000}$
 (iii) Place value of 5 = 5000, Place value of 3 = 300, Place value of 7 = 70, Place value of 0 = 0, Place value of 3 = $\frac{3}{10}$, Place value of 4 = $\frac{4}{100}$
3. (i) $67.83 = (6 \times 10) + (7 \times 1) + \left(8 \times \frac{1}{10}\right) + \left(3 \times \frac{1}{100}\right)$
 (ii) $24.675 = (2 \times 10) + (4 \times 1) + \left(6 \times \frac{1}{10}\right) + \left(7 \times \frac{1}{100}\right) + \left(5 \times \frac{1}{1000}\right)$
 (iii) $8.006 = (8 \times 1) + \left(6 \times \frac{1}{1000}\right)$
4. (i) 46.79 (ii) 731.84 (iii) 805.806
5. (i) 7.500, 64.230, 0.074 (ii) 0.600, 5.937, 2.360, 4.200
 (iii) 1.60, 0.07, 3.58, 2.90 (iv) 2.500, 0.630, 14.080, 1.637
6. (i) $5.06 < 5.69 < 5.8 < 7.14 < 7.2$ (ii) $0.06 < 0.6 < 6.06 < 6.6 < 66.6$
 (iii) $6.05 < 6.4 < 6.45 < 6.5 < 6.54$ (iv) $0.33 < 3.003 < 3.033 < 3.3 < 3.303$
7. (i) $73.03 > 8.73 > 8.073 > 7.33 > 7.3$ (ii) $30.3 > 30.03 > 3.3 > 3.03 > 3.003$
 (iii) $7.2 > 2.72 > 2.7 > 2.27 > 2.02 > 2.007$ (iv) $88.8 > 88.08 > 8.88 > 8.088 > 8.008$
8. (i) $\frac{9}{10}$ (ii) $\frac{2}{25}$ (iii) $\frac{12}{25}$ (iv) $\frac{28}{125}$
9. (i) $16\frac{1}{2}$ (ii) $4\frac{11}{40}$ (iii) $7\frac{1}{250}$
10. (i) 21.415 (ii) 3.6 (iii) 2.475 (iv) 0.95
 (v) 0.428 (vi) 0.875
11. (i) 8.640 kg (ii) 6.008 kg (iii) 4.365 km (iv) 0.27 km
 (v) 0.035 km (vi) 15.850 kg (vii) Rs.18.25 (viii) Rs. 0.32

Short answer type questions

- | | | | | |
|------------|----------------|--------------------------------|-------------------|----------------|
| 12. | (i) 229.04 | (ii) 121.395 | (iii) 115.630 | |
| 13. | (i) 32.77 | (ii) 88.963 | (iii) 174.883 | (iv) 30.805 |
| | (v) 40.15 m | (vi) 7096.941 m or 7.096941 km | | (vii) 7.500 kg |
| | (viii) 4.985 L | | | |
| 14. | 0.195 | 15. 0.358 | 16. 55.627 | |

Long answer type questions

- | | | | | |
|------------|------------|----------------------|----------------------|---------------------|
| 17. | (i) 2 | (ii) 1 | (iii) 1.5 | (iv) 0.01 |
| | (v) 1.3 | (vi) 2.447 | (vii) 108.987 | (viii) 50 |
| | (ix) 2.761 | (x) 99.20 | | |
| 18. | 3.50 | 19. 0.901 | 20. 3.57 | 21. 151.18 |
| 22. | 125.05 m | 23. 159.32 cm | 24. 522.76 km | 25. 557.75 L |

Exercise-01 Solutions

Multiple choice questions

1. Option (1)

$$4 + 4.44 + 44.4 + 4.04 + 444$$

$$\Rightarrow 4.00 + 4.44 + 44.40 + 4.04 + 444.00$$

$$\begin{array}{r} 444.00 \\ 44.40 \\ 4.44 \\ 4.04 \\ + 4.00 \\ \hline 500.88 \end{array}$$

[Place zero after the decimal in each number to make the no. of digits after decimal equal]

2. Option (3)

$$6202.5 + 620.25 + 62.025 + 6.2025 + 0.62025$$

$$\begin{array}{r} 6202.50000 \\ 620.25000 \\ 62.02500 \\ 6.20250 \\ + 0.62025 \\ \hline 6891.59775 \end{array}$$

Place the digits and decimal in one line.

$$\therefore 6891.59775$$

3. Option (3)

$$685.59 - x = 607.88 - 351.46$$

$$\Rightarrow 685.59 - x = 256.42$$

$$\Rightarrow 685.59 - 256.42 = x$$

$$\Rightarrow x = 429.17$$

$$\begin{array}{r} 607.88 \\ - 351.46 \\ \hline 256.42 \end{array}$$

4. Option (4)

$$301.01 - 0.101 = x + 198.01$$

$$\Rightarrow 300.909 = x + 198.01$$

$$\Rightarrow 300.909 - 198.01 = x$$

$$\Rightarrow 102.899 = x$$

$$102.899$$

$$\begin{array}{r} 301.010 \\ - 0.101 \\ \hline 300.909 \end{array}$$

5. Option (4)

$$2.002 + 7.9 \{2.8 - 6.3 (3.6 - 1.5) + 15.6\} = ?$$

Using BODMAS \Rightarrow

B – Brackets

O – OF

D – Division

M – Multiplication

A – addition

S – Subtraction

$$\begin{aligned}
 &= 2.002 + 7.9 \{2.8 - 6.3 (2.1) + 15.6\} \\
 &= 2.002 + 7.9 \{2.8 - 13.23 + 15.6\} \\
 &= 2.002 + 7.9 \{2.8 + 15.6 - 13.23\} \\
 &= 2.002 + 7.9 \{18.4 - 13.23\} \\
 &= 2.002 + 7.9 \times 5.17 \\
 &= 2.002 + 40.843 \\
 &= 42.845
 \end{aligned}$$

6. **Option (3)**

$$\begin{aligned}
 \frac{7}{10} &= ? \\
 7 \times \frac{1}{10} &\left(\frac{1}{10} \text{ means one-tenth} \right) \text{ or } \left[\frac{1}{10} = 0.1 \right] \\
 \therefore 7 \times 0.1 \\
 &= 0.7
 \end{aligned}$$

7. **Option (4)**

$$\begin{aligned}
 \frac{5}{100} \\
 &= 5 \times \frac{1}{100} \left[\frac{1}{100} \text{ or one hundredths} \right] \\
 &= 5 \text{ hundredths } \left[\frac{5}{100} = 0.05 \right] \\
 &= 0.05
 \end{aligned}$$

8. **Option (2)**

$$\begin{aligned}
 \frac{9}{1000} &= ? \\
 &= 9 \text{ thousandths} \\
 &= 0.009
 \end{aligned}$$

9. **Option (1)**

$$\begin{aligned}
 \frac{16}{1000} \\
 &= 0 \text{ tenth } 1 \text{ hundredth } 6 \text{ thousandths} \\
 &= \frac{0}{10} + \frac{1}{100} + \frac{6}{1000} \\
 &= 0.01 + 0.006 \\
 &= 0.016
 \end{aligned}$$

10. Option (3)

$$\begin{aligned} & \frac{134}{1000} \\ &= \frac{1}{10} + \frac{3}{100} + \frac{4}{1000} \\ &= \frac{100}{1000} + \frac{30}{1000} + \frac{4}{1000} \\ &= 0.1 + 0.03 + 0.004 = 0.134 \end{aligned}$$

11. Option (1)

$$\begin{aligned} & 2\frac{17}{100} = ? \\ &= 2 + \frac{17}{100} = 2 + 0.17 \\ &= 2.17 \end{aligned}$$

12. Option (2)

$$\begin{aligned} & 4\frac{3}{100} = ? \\ &= 4 + \frac{3}{100} = 4 + 0.03 \\ &= 4.03 \end{aligned}$$

13. Option (2)

$$\begin{aligned} & 6.25 = ? \\ &= \frac{625}{100} \\ &= \frac{5 \times 5 \times 5 \times 5}{5 \times 2 \times 5 \times 2} \\ &= \frac{25}{4} \\ &= 6\frac{1}{4} \end{aligned}$$

14. Option (2)

$$\begin{aligned} & \frac{6}{25} = ? \\ & \Rightarrow \frac{6}{25} \\ &= \frac{6 \times 4}{25 \times 4} = \frac{24}{100} \quad [\text{Multiply numerator and denominator by 4 to make denominator in the form of } 10^n] \\ &= 0.24 \end{aligned}$$

15. Option (3)

$$\begin{aligned} 4\frac{7}{8} &= ? \\ &= 4 + \frac{7}{8} \\ &= 4 + \frac{7 \times 5}{8 \times 5} \\ &= 4 + \frac{35}{40} \\ &= 4 + \frac{35}{40} \times \frac{1}{10} \\ &= 4 + 8.75 \times \frac{1}{10} \\ &= 4 + 0.875 \\ &= 4.875 \end{aligned}$$

16. Option (1)

$$\begin{aligned} 24.8 &= ? \\ &= \frac{248}{10} = \frac{124}{5} \\ &= 24\frac{4}{5} \end{aligned}$$

17. Option (2)

$$\begin{aligned} 2\frac{1}{25} &= ? \\ \frac{2 \times 25 + 1}{25} &= \frac{50 + 1}{25} = \frac{51}{25} \\ &\text{Multiply numerator and denominator by 4} \\ &= \frac{51 \times 4}{25 \times 4} = \frac{204}{100} \\ &= 2.04 \end{aligned}$$

18. Option (3)

$$\begin{aligned} 2 + \frac{3}{10} + \frac{4}{100} &= ? \\ &= 2 \text{ ones } 3 \text{ tenths } 4 \text{ hundredths} \\ &= 2 + 0.3 + 0.04 \\ &= 2.34 \end{aligned}$$

19. Option (2)

$$\begin{aligned} 2 + \frac{6}{100} &= ? \\ 2 + 0.06 &= 2.06 \end{aligned}$$

20. **Option (3)**

$$\frac{4}{100} + \frac{7}{10000} = ?$$

$$= 0.04 + 0.0007$$

$$= 0.0407$$

True or false

1. **True**

$$\frac{1}{10} = 0.1 \text{ and } \frac{1}{100} = 0.01; \text{ etc.}$$

2. **True**

$$\text{Ex. } 6.30 = \frac{630}{100} \text{ and } 8.1 = \frac{81}{10}$$

3. **False**

Every decimal can be represented on the number line.

4. **False**

$$\begin{array}{ccc} 45.698 < 456.98 \\ \underbrace{\hspace{1cm}} & & \underbrace{\hspace{1cm}} \\ 3 \text{ decimal} & & 2 \text{ decimal} \\ \text{places} & & \text{places} \end{array}$$

5. **False**

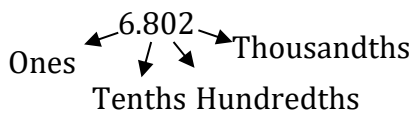
$$\text{Ex. } 3.46 - 2.1$$

$$\begin{array}{r} 3.46 \\ \text{Then place zero after 1 in 2.1 i.e., 2.10 so that decimal places become equal} \\ \underline{-2.10} \\ 1.36 \end{array}$$

Fill in the blanks

1. The decimal point comes between one's place and **tenth** place in a decimal number.

2. Hundreds tens ones. Tenths hundredths



$$\text{Place value of 2} = \frac{2}{1000} = 0.002$$

3. 1 circle \longrightarrow Divided into 100 equal parts $\frac{1}{100}$.
 $= 0.01$

4. $10 + \frac{5}{10} + \frac{7}{100}$

5. 3 ones, 4 tenths, 0 hundredths and 1 thousandths

$$= 3 \times 1 + \frac{4}{10} + \frac{0}{100} + \frac{1}{1000}$$

$$= 3 + 0.4 + 0.00 + 0.001$$

$$= 3.401$$

Exercise-02 Solutions

1. (i) Fifty-eight point six three = 58.63
 (ii) Seven point seven six = 7.76
 (iii) Four hundred four point zero four four = 404.044
 (iv) Point zero one five = 0.015

2. Place value is the value of that number where that number stays.

- (i) 14.83

⇒ 1 4 8 3

Tens Ones Tenths Hundredths

Place value of 1 ⇒ $1 \times 10 = 10$

Place value of 4 ⇒ $4 \times 1 = 4$

Place value of 8 ⇒ $\frac{8}{10} = 0.8$

Place value of 3 ⇒ $\frac{3}{100} = 0.03$

- (ii) 46.075

4 6 . 0 7 5
 ↑ ↑ ↑ ↑ ↑

Tens Ones Tenths Hundredths Thousandths

Place value of 6 = $6 \times 1 = 6$

Place value of 4 = $4 \times 10 = 40$

Place value of 0 = $\frac{0}{10} = 0$

Place value of 7 = $\frac{7}{100} = 0.07$

Place value of 5 = $\frac{5}{1000} = 0.005$

- (iii) 5370.34

5 3 7 0 . 3 4
 ↑ ↑ ↑ ↑ ↑ ↑ ↑

Thousands Hundreds Tens Ones tenths Hundredths

Place value of 5 = $5 \times 1000 = 5000$

Place value of 3 = $3 \times 100 = 300$

Place value of 7 = $7 \times 10 = 70$

Place Value of 0 = $0 \times 1 = 0$

Place value of 3 = $\frac{3}{10} = 0.3$

Place value of 4 = $\frac{4}{100} = 0.04$

3. (i) 67.83

6	7	.	8	3
↑	↑		↑	↑
Tens	Ones		Tenths	Hundredths

$$= 6 \times 10 + 7 \times 1 + \frac{8}{10} + \frac{3}{100}$$

$$= (6 \times 10) + (7 \times 1) + \left(8 \times \frac{1}{10}\right) + \left(3 \times \frac{1}{100}\right)$$

(ii) 24.675

2	4	.	6	7	5
↑	↑		↑	↑	↑
Tens	Ones		Tenths	Hundredths	Thousandths

$$= (2 \times 10) + (4 \times 1) + \left(6 \times \frac{1}{10}\right) + \left(7 \times \frac{1}{100}\right) + \left(5 \times \frac{1}{1000}\right)$$

(iii) 8.006

8	.	0	0	6
↑		↑	↑	↑
Ones		Tenths	Hundredths	Thousandths

$$= (8 \times 1) + \left(0 \times \frac{1}{10}\right) + \left(0 \times \frac{1}{100}\right) + \left(6 \times \frac{1}{1000}\right)$$

4. (i) $40 + 6 + \frac{7}{10} + \frac{9}{100}$

$$= 46 + \frac{7}{10} + \frac{9}{100}$$

$$= 46 + 0.7 + 0.09 = 46 + 0.79$$

$$= 46.79$$

(ii) $700 + 30 + 1 + \frac{8}{10} + \frac{4}{100}$

$$= 731 + \frac{8}{10} + \frac{4}{100}$$

$$= 731 + 0.8 + 0.04$$

$$= 731.84$$

(iii) $800 + 5 + \frac{8}{10} + \frac{6}{1000}$

$$= 805 + \frac{8}{10} + \frac{6}{1000}$$

$$= 805 + 0.8 + 0.006$$

$$= 805.806$$

5. **Like decimals** : Decimals having the same number of decimal places are called like decimals.

(i) 7.5, 64.23, 0.074

⇒ $7.5 = 7.500$ (Place 2 zeroes after 5)

$64.23 = 64.230$ (Place 1 zero)

$0.074 = 0.074$

(ii) 0.6, 5.937, 2.36, 4.2

⇒ 5.937 has 3 decimal places.

∴ Convert all by placing zeroes in the numbers after the last digit in decimal part .

⇒ 0.600

5.937

2.360 and 4.200

(iii) 1.6, 0.07, 3.58, 2.9

⇒ 0.07 and 3.58 has 2 decimal places

∴ $1.6 = 1.60$

$0.07 = 0.07$

$3.58 = 3.58$

$2.9 = 2.90$

(iv) 2.5, 0.63, 14.08, 1.637

⇒ 1.637 has three decimal places

$2.5 = 2.500$

∴ $0.63 = 0.630$

$14.08 = 14.080$

$1.637 = 1.637$

6. First convert all the decimals into like decimals and then compare their integral part.

If integral part is same then compare their decimal places and then arrange them in ascending or descending order.

(i) 5.8, 7.2, 5.69, 7.14, 5.06

⇒ $5.8 = 5.80$

⇒ $7.2 = 7.20$

⇒ $5.69 = 5.69$

⇒ $7.14 = 7.14$

⇒ $5.06 = 5.06$

⇒ $5.06 < 5.69 < 5.80 < 7.14 < 7.20$

(ii) 0.6, 6.6, 6.06, 66.6, 0.06

⇒ $0.60, 6.60, 6.06, 66.60, 0.06$

⇒ $0.06 < 0.60 < 6.06 < 6.60 < 66.60$

$$(iii) \quad 6.54, 6.45, 6.4, 6.5, 6.05$$

$$\Rightarrow 6.54, 6.45, 6.40, 6.50, 6.05$$

$$\Rightarrow 6.05 < 6.40 < 6.45 < 6.50 < 6.54$$

$$(iv) \quad 3.3, 3.303, 3.033, 0.33, 3.003$$

$$\Rightarrow 3.300, 3.303, 3.033, 0.330, 3.003$$

$$\Rightarrow 0.330 < 3.003 < 3.033 < 3.300 < 3.303$$

$$7. \quad (i) \quad 7.3, 8.73, 73.03, 7.33, 8.073$$

$$\Rightarrow 7.300, 8.730, 73.030, 7.330, 8.073$$

$$\Rightarrow 73.030 > 8.730 > 8.073 > 7.330 > 7.300$$

$$(ii) \quad 3.3, 3.03, 30.3, 30.03, 3.003$$

$$\Rightarrow 3.300, 3.030, 30.300, 30.030, 3.003$$

$$\Rightarrow 30.300 > 30.030 > 3.300 > 3.030 > 3.003$$

$$(iii) \quad 2.7, 7.2, 2.27, 2.72, 2.02, 2.007$$

$$\Rightarrow 2.700, 7.200, 2.270, 2.720, 2.020, 2.007$$

$$\Rightarrow 7.200 > 2.720 > 2.700 > 2.270 > 2.020 > 2.007$$

$$(iv) \quad 8.88, 8.088, 88.8, 88.08, 8.008$$

$$\Rightarrow 8.880, 8.088, 88.800, 88.080, 8.008$$

$$\Rightarrow 88.800 > 88.080 > 8.880 > 8.088 > 8.008$$

8. When converting a decimal into a fraction, remove decimal from the number and place 10^n (n = no. of digits after decimal) in the denominator.

$$(i) \quad 0.9 = \frac{09}{10} = \frac{9}{10}$$

$$(ii) \quad 0.08 = \frac{008}{100} = \frac{8}{100} = \frac{4}{50} = \frac{2}{25}$$

$$(iii) \quad 0.48 = \frac{48}{100} = \frac{24}{50} = \frac{12}{25}$$

$$(iv) \quad 0.224 = \frac{224}{1000} = \frac{112}{500} = \frac{56}{250} = \frac{28}{125}$$

9. A mixed fraction consists of a whole number and a fractional part.

$$(i) \quad 16.5 = \frac{165}{10} = \frac{33}{2} = 16\frac{1}{2}$$

$$(ii) \quad 4.275 = \frac{4275}{1000} = \frac{855}{200} = \frac{171}{40} = 4\frac{11}{40}$$

$$(iii) \quad 7.004 = \frac{7004}{1000} = \frac{1751}{250} = 7\frac{1}{250}$$

10. (i) $\frac{21415}{1000} = 21.415$
- (ii) $3\frac{3}{5} = \frac{18}{5} = 3.6$
- (iii) $2\frac{19}{40} = \frac{99}{40} = \frac{24.75}{10} = 2.475$
- (iv) $\frac{19}{20} = \frac{9.5}{10} = 0.95$
- (v) $\frac{107}{250} = \frac{4.28}{10} = 0.428$
- (vi) $\frac{7}{8} = 0.875$

11. (i) 1 kg = 1000 g
 $1 \text{ g} = \frac{1}{1000} \text{ kg}$
 8 kg 640 g
 $= 8 + \frac{640}{1000} = 8 + 0.640 = 8.640 \text{ kg}$
- (ii) 6 kg 8 g in kilograms
 $6 + \frac{8}{1000}$
 $= 6 + 0.008 = 6.008 \text{ kg}$
- (iii) 4 km 365 m in kilometers
 1 km = 1000 m
 $4 + \frac{365}{1000}$
 $= 4 + 0.365$
 4.365 km
- (iv) 270 m in kilometers
 $\frac{270}{1000} = 0.27 \text{ km}$
- (v) 35 m in kilometers
 $\frac{35}{1000} = 0.035 \text{ km}$
- (vi) 15 kg 850 g in kilograms
 $15 + \frac{850}{1000} \Rightarrow 15 + 0.850 \text{ kg}$
 $= 15.850 \text{ kg}$

(vii) Rs. 18 and 25 paise in rupees [1 Rs. = 100 paise]

$$18 + \frac{25}{100} = 18 + 0.25$$

$$= \text{Rs. } 18.25$$

(viii) 32 paise in rupees [1 Rs. = 100 paise]

$$\Rightarrow \frac{32}{100}$$

$$= \text{Rs. } 0.32$$

12. (i) 23.7, 106.94, 68.9 and 29.5

$$106.94$$

$$68.90$$

$$29.50$$

$$+23.70$$

$$\hline 229.04$$

(ii) 18.6, 84.75, 8.345 and 9.7

$$84.750$$

$$8.345$$

$$18.600$$

$$+9.700$$

$$\hline 121.395$$

(iii) 8.236, 16.064, 63.8 and 27.53

$$16.064$$

$$8.236$$

$$27.530$$

$$+63.800$$

$$\hline 115.630$$

13. (i) 59.63 from 92.4

$$92.40$$

$$-59.63$$

$$\hline 32.77$$

(ii) 127.237 from 216.2

$$216.200$$

$$-127.237$$

$$\hline 88.963$$

(iii) 348.237 from 523.12

$$523.120$$

$$-348.237$$

$$\hline 174.883$$

(iv) 39.875 from 70.68

$$70.680$$

$$-39.875$$

$$\hline 30.805$$

(v) 205.35 m from 245.5 m

$$\begin{array}{r} 245.50 \\ -205.35 \\ \hline 40.15\text{m} \end{array}$$

(vi) 2.059 m from 7.099 km

$$7.099 - \frac{2.059}{1000} \text{ km} \quad (7.099 \text{ km} = 7099\text{m})$$

$$\begin{array}{r} 7.099000 \\ -0.002059 \\ \hline 7.096941\text{km} \end{array} \quad \text{or} \quad \begin{array}{r} 7099.000 \\ -2.059 \\ \hline 7096.941\text{m} \end{array}$$

(vii) 3.250 kg from 10.750 kg

$$\begin{array}{r} 10.750 \\ -3.250 \\ \hline 7.500\text{kg} \end{array}$$

(viii) 3.515 litres from 8.5 litres

$$\begin{array}{r} 8.750 \\ -3.515 \\ \hline 4.985\text{L} \end{array}$$

14. Let the number be "x".

$$\begin{array}{r} \text{then } x + 0.805 = 1 \\ \Rightarrow x = 1 - 0.805 \\ x = 0.195 \end{array} \quad \begin{array}{r} 1.000 \\ -0.805 \\ \hline 0.195 \end{array}$$

15. Let the number be "x" then we have

$$\begin{array}{r} \Rightarrow 3 - x = 2.642 \\ \Rightarrow 3 - 2.642 = x \\ \Rightarrow x = 0.358 \end{array} \quad \begin{array}{r} 3.000 \\ -2.642 \\ \hline 0.358 \end{array}$$

$$\begin{array}{r} 83.407 \\ -27.780 \\ \hline 55.627 \end{array}$$

83.407 should be decreased by 55.627 to get 27.78

17. (i) $3.4 + 5 - 6.4$
 $= 3.4 + 5.0 - 6.4$ [Using BODMAS]
 $= 8.4 - 6.4$
 $= 2.0 = 2$

(ii) $2.8 + 1.1 - 2.9$
 $= 3.9 - 2.9$
 $= 1.0 = 1$

- (iii) $3 - 3.3 + 1.8$
 $= 3 + 1.8 - 3.3$
 $= 4.8 - 3.3$
 $= 1.5$
- (iv) $3.28 + 1.63 - 4.9$
 $= 3.28 + 1.63 - 4.90$
 $= 4.91 - 4.90 = 0.01$
- (v) $2.36 - 3.24 + 2.18$
 $= 2.36 + 2.18 - 3.24$
 $= 4.54 - 3.24$
 $= 1.30 = 1.3$
- (vi) $6.7 + 3.21 - 7.463$
 $= 9.910 - 7.463$
 $= 2.447$
- (vii) $48.93 + 50.05 + 10.007$
 $= 98.98 + 10.007$
 $= 108.987$
- (viii) $63.368 + 21.732 - 35.1$
 $= 85.1 - 35.1$
 $= 50$
- (ix) $2.67 - 1.787 + 1.878$
 $= 4.548 - 1.787$
 $= 2.761$
- (x) $101.28 + 28.19 - 30.27$
 $= 129.47 - 30.27$
 $= 99.20$

18. Sum of 5.99 and 0.65 \Rightarrow
 subtract 3.14 from 6.64 \Rightarrow

19. Let the number be "x",
 then $x + 99.099 = 100$

$$x = 100.000 - 99.099$$

$$x = 0.901$$

20. Let the number be "x",
 Greatest 2-digit number = 99

$$102.57 - x = 99$$

$$102.57 - 99 = x$$

$$3.57 = x$$

$$\begin{array}{r} 5.99 \\ +0.65 \\ \hline 6.64 \\ -3.14 \\ \hline 3.50 \end{array}$$

$$\begin{array}{r} 102.57 \\ -99.00 \\ \hline 3.57 \end{array}$$