

# Decimals

## Understanding the Lesson

- Decimal system.
- Idea of decimal fraction.
- Representation of decimals on number line.
- Fractions as decimals.
- Decimals as fractions.
- Tenths, Hundredths and thousandths of a whole number.
- Comparison of decimals.
- Using decimals in representing Money, Length and Weight.
- Addition and subtraction of numbers with decimals.
- Word problems based on decimal system.

## Conceptual Facts

- Fractions with denominators 10, 100 and 1000, etc., can be represented as decimal fractions. For example:  $\frac{7}{10}$ ,  $\frac{21}{100}$  and  $\frac{223}{1000}$ , etc., are all decimal fractions.
- If a whole number is divided into 10 equal parts, then each part is called one-tenth of a unit and written as  $\frac{1}{10}$  and 0.1 in decimal notations.
- If a whole number is divided into 100 equal parts, then each part is called one-hundredth of a unit and written as  $\frac{1}{100}$  and 0.01 in decimal notation.
- In standard form, the decimal is always put between the unit place and tenths-place.
- In the place value chart, as we go from left to the right, the multiplying factor becomes  $\frac{1}{10}$  of the previous factor.
- All decimals can also be represented on number line.
- Decimals are used in many way in our lives. For example, in representing units of money, length and weight.
- Decimal numbers having the same number of decimal places are called 'Like decimals'. For example: 0.23, 1.26, 3.65 are all like decimals.
- Decimal numbers having different number of decimal places are called 'unlike decimals'. For example: 2.34, 5.650, 4.2350 are all unlike decimals.

### TRY THESE (PAGE 165)

Q1. Can you now write the following as decimals?

Hundreds (100)	Tens (10)	Ones (1)	Tenths $\left(\frac{1}{10}\right)$
5	3	8	1

(a)

(b)	2	7	3	4
(c)	3	5	4	6

Sol. (a) Given that:

$$\begin{aligned}
 & 5 \text{ hundreds} + 3 \text{ tens} + 8 \text{ ones} + 1 \text{ tenths} \\
 & = 5 \times 100 + 3 \times 10 + 8 \times 1 + 1 \times \frac{1}{10}
 \end{aligned}$$

$$= 500 + 30 + 8 + \frac{1}{10}$$

$$= 538 + \frac{1}{10} = 538.1$$

(b) Given that:

$$2 \text{ hundreds} + 7 \text{ tens} + 3 \text{ ones} + 4 \text{ tenths}$$

$$= 2 \times 100 + 7 \times 10 + 3 \times 1 + 4 \times \frac{1}{10}$$

$$= 200 + 70 + 3 + \frac{4}{10} = 273 + \frac{4}{10} = 273.4$$

(c) Given that:

$$3 \text{ hundreds} + 5 \text{ tens} + 4 \text{ ones} + 6 \text{ tenths}$$

$$= 3 \times 100 + 5 \times 10 + 4 \times 1 + 6 \times \frac{1}{10}$$

$$= 300 + 50 + 4 + \frac{6}{10} = 354 + \frac{6}{10} = 354.6$$

**Q2.** Write the length of Ravi's and Raju's pencil in 'cm' using decimals.

**Sol.** Let the length of Ravi's pencil be 7 cm and 8 mm and that of Raju's pencil be 6 cm and 4 mm

We know that 10 mm = 1 cm

$$1 \text{ mm} = \frac{1}{10} \text{ cm.}$$

Length of Ravi's pencil = 7 cm 8 mm

$$= 7 \text{ cm} + 8 \times \frac{1}{10} \text{ cm} = 7 \text{ cm} + \frac{8}{10} \text{ cm}$$

$$= \left(7 + \frac{8}{10}\right) \text{ cm} = 7.8 \text{ cm}$$

Length of Raju's pencil = 6 cm 4 mm

$$= 6 \text{ cm} + 4 \times \frac{1}{10} \text{ cm} = 6 \text{ cm} + \frac{4}{10} \text{ cm}$$

$$= \left(6 + \frac{4}{10}\right) \text{ cm} = 6.4 \text{ cm.}$$

**Q3.** Make three more examples similar to the one given in question 1 and solve them.

**Sol.** **Example 1:** Write the following in decimals:

	<b>Hundreds (100)</b>	<b>Tens (10)</b>	<b>Ones (1)</b>	<b>Tenths <math>\left(\frac{1}{10}\right)</math></b>
(i)	8	7	3	4
(ii)	6	5	9	3
(iii)	7	4	0	5

**Sol.** (i) Given that:

$$8 \text{ hundreds} + 7 \text{ tens} + 3 \text{ ones} + 4 \text{ tenths}$$

$$= 8 \times 100 + 7 \times 10 + 3 \times 1 + 4 \times \frac{1}{10}$$

$$= 800 + 70 + 3 + \frac{4}{10} = 873 + \frac{4}{10} = 873.4$$

(ii) Given that:

$$6 \text{ hundreds} + 5 \text{ tens} + 9 \text{ ones} + 3 \text{ tenths}$$

$$= 6 \times 100 + 5 \times 10 + 9 \times 1 + 3 \times \frac{1}{10}$$

$$= 600 + 50 + 9 + \frac{3}{10} = 659 + \frac{3}{10} = 659.3$$

(iii) Given that:

$$7 \text{ hundreds} + 4 \text{ tens} + 0 \text{ ones} + 5 \text{ tenths}$$

$$= 7 \times 100 + 4 \times 10 + 0 \times 1 + 5 \times \frac{1}{10}$$

$$= 700 + 40 + 0 + \frac{5}{10} = 740 + \frac{5}{10} = 740.5$$

**Example 2:** Write the following in decimals:

	<b>Hundreds (100)</b>	<b>Tens (10)</b>	<b>Ones (1)</b>	<b>Tenths <math>\left(\frac{1}{10}\right)</math></b>
(i)	5	4	3	2
(ii)	2	5	4	1
(iii)	6	3	2	4

**Sol.** (i) Given that:

$$5 \text{ hundreds} + 4 \text{ tens} + 3 \text{ ones} + 2 \text{ tenths}$$

$$= 5 \times 100 + 4 \times 10 + 3 \times 1 + 2 \times \frac{1}{10}$$

$$= 500 + 40 + 3 + \frac{2}{10}$$

$$= 543 + \frac{2}{10} = 543.2$$

(ii) Given that:

$$2 \text{ hundreds} + 5 \text{ tens} + 4 \text{ ones} + 1 \text{ tenth}$$

$$= 2 \times 100 + 5 \times 10 + 4 \times 1 + 1 \times \frac{1}{10}$$

$$= 200 + 50 + 4 + \frac{1}{10} = 254 + \frac{1}{10} = 254.1$$

(iii) Given that:

$$6 \text{ hundreds} + 3 \text{ tens} + 2 \text{ ones} + 4 \text{ tenths}$$

$$= 6 \times 100 + 3 \times 10 + 2 \times 1 + 4 \times \frac{1}{10}$$

$$= 600 + 30 + 2 + \frac{4}{10} = 632 + \frac{4}{10} = 632.4$$

**Example 3:** Write the following in decimals.

	<b>Hundreds (100)</b>	<b>Tens (10)</b>	<b>Ones (1)</b>	<b>Tenths <math>\left(\frac{1}{10}\right)</math></b>
(i)	5	5	5	3
(ii)	3	4	6	7
(iii)	8	6	2	4

**Sol.** (i) Given that:

$$5 \text{ hundreds} + 5 \text{ tens} + 5 \text{ ones} + 3 \text{ tenths}$$

$$= 5 \times 100 + 5 \times 10 + 5 \times 1 + 3 \times \frac{1}{10}$$

$$= 500 + 50 + 5 + \frac{3}{10} = 555 + \frac{3}{10} = 555.3$$

(ii) Given that:

$$3 \text{ hundreds} + 4 \text{ tens} + 6 \text{ ones} + 7 \text{ tenths}$$

$$= 3 \times 100 + 4 \times 10 + 6 \times 1 + 7 \times \frac{1}{10}$$

$$= 300 + 40 + 6 + \frac{7}{10} = 346 + \frac{7}{10} = 346.7$$

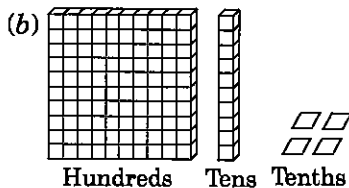
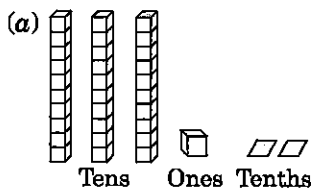
$$(iii) 8 \text{ hundreds} + 6 \text{ tens} + 2 \text{ ones} + 4 \text{ tenths}$$

$$= 8 \times 100 + 6 \times 10 + 2 \times 1 + 4 \times \frac{1}{10}$$

$$= 800 + 60 + 2 + \frac{4}{10} = 862 + \frac{4}{10} = 862.4$$

**EXERCISE 8.1**

Q1. Write the following as numbers in the given table.



Hundreds (100)	Tens (10)	Ones (1)	Tenths $\left(\frac{1}{10}\right)$

Sol. From the given data, we have

Hundreds (100)	Tens (10)	Ones (1)	Tenths $\left(\frac{1}{10}\right)$
(a) 0	3	1	2
(b) 1	1	0	4

Q2. Write the following decimals in the place value table.

- (a) 19.4                      (b) 0.3  
(c) 10.6                      (d) 205

TRY THESE (PAGE 167)

Q1. Write  $\frac{3}{2}$ ,  $\frac{4}{5}$ ,  $\frac{8}{5}$  in decimal notation.Sol. (i)  $\frac{3}{2}$ 

$$\frac{3}{2} = \frac{3 \times 5}{2 \times 5} = \frac{15}{10} = 1.5$$

(ii)  $\frac{4}{5}$ 

$$\frac{4}{5} = \frac{4 \times 2}{5 \times 2} = \frac{8}{10} = 0.8$$

(iii)  $\frac{8}{5}$ 

$$\frac{8}{5} = \frac{8 \times 2}{5 \times 2} = \frac{16}{10} = 1.6$$

Sol. Place value table is given as under:

	Hundreds (100)	Tens (10)	Ones (1)	Tenths $\left(\frac{1}{10}\right)$	
(a)	0	1	9	4	(19.4)
(b)	0	0	0	3	(0.3)
(c)	0	1	0	6	(10.6)
(d)	2	0	5	9	(205.9)

Q3. Write each of the following as decimals:

- (a) Seven-tenths  
(b) Two tens and nine-tenths  
(c) Fourteen point six  
(d) One hundred and two ones  
(e) Six hundred point eight

Sol. (a) Seven-tenths =  $7 \times \frac{1}{10} = 0.7$ 

$$(b) \text{ Two tens and nine-tenths}$$

$$= 2 \text{ tens} + 0 \text{ ones} + 9 \text{ tenths}$$

$$= 20 + \frac{9}{10} = 20.9$$

$$(c) \text{ Fourteen point six} = 14.6$$

$$(d) \text{ One hundred and two ones}$$

$$= 1 \times 100 + 2 \times 1 = 100 + 2 = 102$$

$$(e) \text{ Six hundred point eight} = 600.8$$

Q4. Write each of the following as decimals:

$$(a) \frac{5}{10} \qquad \qquad \qquad (b) 3 + \frac{7}{10}$$

$$(c) 200 + 60 + 5 + \frac{1}{10}$$

$$(d) 70 + \frac{8}{10} \quad (e) \frac{88}{10} \quad (f) \frac{2}{10}$$

$$(g) \frac{3}{2} \quad (h) \frac{2}{5} \quad (i) \frac{12}{5}$$

$$(j) 3\frac{3}{5} \quad (k) 4\frac{1}{2}$$

Sol. (a)  $\frac{5}{10} = 0.5$

$$(b) 3 + \frac{7}{10} = 3 + 0.7 = 3.7$$

$$(c) 200 + 60 + 5 + \frac{1}{10} = 265 + \frac{1}{10} = 265.1$$

$$(d) 70 + \frac{8}{10} = 70 + 0.8 = 70.8$$

$$(e) \frac{88}{10} = 8.8$$

$$(f) \frac{2}{10} = 0.2$$

$$(g) \frac{3}{2} = \frac{3 \times 5}{2 \times 5} = \frac{15}{10} = 1.5$$

$$(h) \frac{2}{5} = \frac{2 \times 2}{5 \times 2} = \frac{4}{10} = 0.4$$

$$(i) \frac{12}{5} = \frac{12 \times 2}{5 \times 2} = \frac{24}{10} = 2.4$$

$$(j) 3\frac{3}{5} = 3 + \frac{3}{5} = 3 + \frac{3 \times 2}{5 \times 2} = 3 + \frac{6}{10} = 3 + 0.6 = 3.6$$

$$(k) 4\frac{1}{2} = 4 + \frac{1}{2} = 4 + \frac{1 \times 5}{2 \times 5} = 4 + \frac{5}{10} = 4 + 0.5 = 4.5$$

Q5. Write the following decimals as fractions. Reduce the fractions to lowest form.

$$(a) 0.6 \quad (b) 2.5 \quad (c) 1.0 \quad (d) 3.8$$

$$(e) 13.7 \quad (f) 21.2 \quad (g) 6.4$$

Sol. (a)  $0.6 = 0 + \frac{6}{10} = \frac{6}{10}$

$$\text{Lowest form of } \frac{6}{10} = \frac{6 \div 2}{10 \div 2} = \frac{3}{5}$$

$$(b) 2.5 = 2 + 0.5 = 2 + \frac{5}{10} = \frac{2 \times 10 + 5}{10}$$

$$= \frac{20 + 5}{10} = \frac{25}{10}$$

$$\text{Lowest form of } \frac{25}{10} = \frac{25 \div 5}{10 \div 5} = \frac{5}{2}$$

$$(c) 1.0 = 1 + \frac{0}{10} = 1$$

Lowest form is also 1.

$$(d) 3.8 = 3 + 0.8 = 3 + \frac{8}{10} = \frac{3 \times 10 + 8}{10}$$

$$= \frac{30 + 8}{10} = \frac{38}{10}$$

$$\text{Lowest form of } \frac{38}{10} = \frac{38 \div 2}{10 \div 2} = \frac{19}{5}$$

$$(e) 13.7 = 13 + 0.7 = 13 + \frac{7}{10} = \frac{13 \times 10 + 7}{10}$$

$$= \frac{130 + 7}{10} = \frac{137}{10}$$

137 and 10 are co-prime. So lowest form is also  $\frac{137}{10}$ .

$$(f) 21.2 = 21 + 0.2 = 21 + \frac{2}{10} = \frac{21 \times 10 + 2}{10}$$

$$= \frac{210 + 2}{10} = \frac{212}{10}$$

$$\text{Lowest form of } \frac{212}{10} = \frac{212 \div 2}{10 \div 2} = \frac{106}{5}$$

$$(g) 6.4 = 6 + 0.4 = 6 + \frac{4}{10} = \frac{6 \times 10 + 4}{10}$$

$$= \frac{60 + 4}{10} = \frac{64}{10}$$

$$\text{Lowest form of } \frac{64}{10} = \frac{64 \div 2}{10 \div 2} = \frac{32}{5}$$

Q6. Express the following as cm using decimals.

$$(a) 2 \text{ mm}$$

$$(b) 30 \text{ mm}$$

$$(c) 116 \text{ mm}$$

$$(d) 4 \text{ cm } 2 \text{ mm}$$

$$(e) 162 \text{ mm}$$

$$(f) 83 \text{ mm}$$

Sol. We know that 10 mm = 1 cm.

$$(a) 2 \text{ mm} = \frac{2}{10} \text{ cm} = 0.2 \text{ cm}$$

$$(b) 30 \text{ mm} = \frac{30}{10} \text{ cm} = 3 \text{ cm}$$

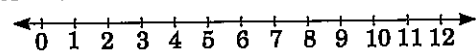
$$(c) 116 \text{ mm} = \frac{116}{10} \text{ cm} = \left(11 + \frac{6}{10}\right) \text{ cm} = 11.6 \text{ cm}$$

$$(d) 4 \text{ cm } 2 \text{ mm} = 4 \text{ cm} + 2 \text{ mm} = \left(4 + \frac{2}{10}\right) \text{ cm} = 4.2 \text{ cm}$$

$$(e) 162 \text{ mm} = \frac{162}{10} \text{ cm} = \left(16 + \frac{2}{10}\right) \text{ cm} = 16.2 \text{ cm}$$

$$(f) 83 \text{ mm} = \frac{83}{10} \text{ cm} = \left(8 + \frac{3}{10}\right) \text{ cm} = 8.3 \text{ cm}$$

Q7. Between which two whole numbers on the number line are the given numbers lie? Which of these whole numbers is nearer the number?



$$(a) 0.8$$

$$(b) 5.1$$

$$(c) 2.6$$

$$(d) 6.4$$

$$(e) 9.1$$

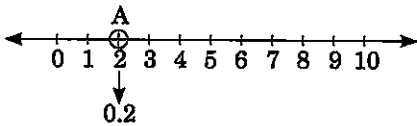
$$(f) 4.9$$

- Sol. (a) 0.8 lies between the whole numbers 0 and 1.  
 (b) 5.1 lies between the whole numbers 5 and 6.  
 (c) 2.6 lies between the whole numbers 2 and 3.  
 (d) 6.4 lies between the whole numbers 6 and 7.  
 (e) 9.1 lies between the whole numbers 9 and 10.  
 (f) 4.9 lies between the whole numbers 4 and 5.

Q8. Show the following numbers on the number line.

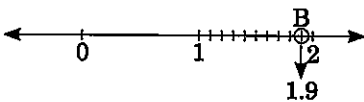
- (a) 0.2      (b) 1.9      (c) 1.1      (d) 2.5

Sol. (a) 0.2



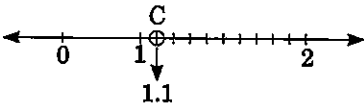
Point A represents 0.2.

(b) 1.9



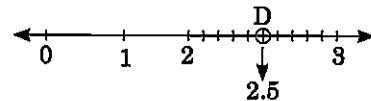
Point B represents 1.9.

(c) 1.1



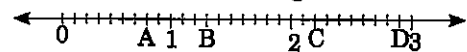
Point C represents 1.1.

(d) 2.5



Point D represents 2.5.

Q9. Write the decimal number represented by the points A, B, C, D on the given number line.



Sol. Point A represents 0.8

Point B represents 1.3

Point C represents 2.2

Point D represents 2.9

Q10. (a) The length of Ramesh's notebook is 9 cm 5 mm. What will be its length in cm?

(b) The length of a young gram plant is 65 mm. Express its length in cm.

Sol. (a) Length of the notebook = 9 cm 5 mm

$$= 9 \text{ cm} + \frac{5}{10} \text{ cm} = \left(9 + \frac{5}{10}\right) \text{ cm}$$

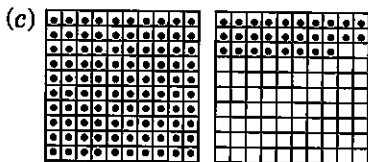
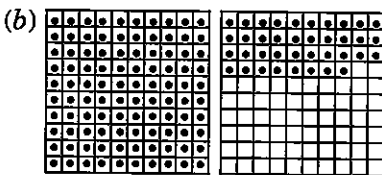
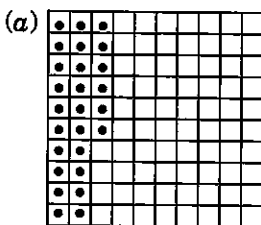
$$= (9 + 0.5) \text{ cm} = 9.5 \text{ cm}$$

(b) Length of the young gram plant = 65 mm

$$= \frac{65}{10} \text{ cm} = \left(6 + \frac{5}{10}\right) \text{ cm} = 6.5 \text{ cm}$$

### EXERCISE 8.2

Q1. Complete the table with the help of these boxes and use decimals to write the number.



	Ones	Tenths	Hundredths	Number
(a)				
(b)				
(c)				

Sol.

	Ones	Tenths	Hundredths	Number
(a)	0	2	6	0.26
(b)	1	3	8	1.38
(c)	1	2	8	1.28

Explanation:

(a) In this figure,

If small block out of 100 are shaded

$$\therefore \text{Decimal representation} = 0.26$$

(b) 100 small blocks + 38 small blocks are shaded

$$\therefore \frac{100}{100} + \frac{38}{100} = 1 + \frac{38}{100} = 1.38$$

$$\therefore \text{Decimal representation} = 1.38$$

(c) 100 small blocks + 28 small blocks are shaded

$$\therefore \frac{100}{100} + \frac{28}{100} = 1 + \frac{28}{100} = 1.28$$

$$\therefore \text{Decimal representation} = 1.28$$

Q2. Write the numbers given in the following place value table in decimal form:

	Hund- reds (100)	Tens (10)	Ones (1)	Ten- ths $\left(\frac{1}{10}\right)$	Hund- redths $\left(\frac{1}{100}\right)$	Thou- sandths $\left(\frac{1}{1000}\right)$
(a)	0	0	3	2	5	0
(b)	1	0	2	6	3	0
(c)	0	3	0	0	2	5
(d)	2	1	1	9	0	2
(e)	0	1	2	2	4	1

Sol. (a) 0 Hundreds + 0 Tens + 3 Ones + 2 Tenths + 5 Hundredths + 0 Thousandths

$$= 0 \times 100 + 0 \times 10 + 3 \times 1 + 2 \times \frac{1}{10} + 5 \times \frac{1}{100} + 0 \times \frac{1}{1000}$$

$$= 0 + 0 + 3 + \frac{2}{10} + \frac{5}{100} + \frac{0}{1000}$$

$$= 3 + 0.2 + 0.05 + 0.000 = 3.250 = 3.25$$

(b) 1 Hundreds + 0 Tens + 2 Ones + 6 Tenths + 3 Hundredths + 0 Thousandths

$$= 1 \times 100 + 0 \times 10 + 2 \times 1 + 6 \times \frac{1}{10} + 3 \times \frac{1}{100} + 0 \times \frac{1}{1000}$$

$$= 100 + 0 + 2 + \frac{6}{10} + \frac{3}{100} + \frac{0}{1000}$$

$$= 102 + 0.6 + 0.03 + 0.000$$

$$= 102.630 = 102.63$$

(c) 0 Hundreds + 3 Tens + 0 Ones + 0 Tenths + 2 Hundredths + 5 Thousandths

$$= 0 \times 100 + 3 \times 10 + 0 \times 1 + 0 \times \frac{1}{10} + 2 \times \frac{1}{100} + 5 \times \frac{1}{1000}$$

$$= 0 + 30 + 0 + 0.0 + 0.02 + 0.005 = 30.025$$

(d) 2 Hundreds + 1 Tens + 1 Ones + 9 Tenths + 0 Hundredths + 2 Thousandths

$$= 2 \times 100 + 1 \times 10 + 1 \times 1 + 9 \times \frac{1}{10} + 0 \times \frac{1}{100} + 2 \times \frac{1}{1000}$$

$$= 200 + 10 + 1 + 0.9 + 0.00 + 0.002$$

$$= 211 + 0.902 = 211.902$$

(e) 0 Hundreds + 1 Tens + 2 Ones + 2 Tenths + 4 Hundredths + 1 Thousandths

$$= 0 \times 100 + 1 \times 10 + 2 \times 1 + 2 \times \frac{1}{10} + 4 \times \frac{1}{100} + 1 \times \frac{1}{1000}$$

$$= 0 + 10 + 2 + \frac{2}{10} + \frac{4}{100} + \frac{1}{1000}$$

$$= 12 + 0.2 + 0.04 + 0.001 = 12.241$$

Q3. Write the following decimals in the place value table.

- (a) 0.29      (b) 2.08      (c) 19.60  
(d) 148.32    (e) 200.812

Sol. (a)  $0.29 = 0 + 0.2 + 0.09 = 0 + \frac{2}{10} + \frac{9}{100}$

$$= 0 \text{ Ones} + 2 \text{ Tenths} + 9 \text{ Hundredths}$$

(b)  $2.08 = 2 + 0.0 + 0.08$

$$= 2 \text{ Ones} + 0 \text{ Tenths} + 8 \text{ Hundredths}$$

(c)  $19.60 = 10 + 9 + 0.6 + 0.00$

$$= 1 \text{ Tens} + 9 \text{ Ones} + 6 \text{ Tenths} + 0 \text{ Hundredths}$$

(d)  $148.32 = 100 + 40 + 8 + 0.3 + 0.02$

$$= 1 \text{ Hundred} + 4 \text{ Tens} + 8 \text{ Ones} + 3 \text{ Tenths} + 2 \text{ Hundredths}$$

(e)  $200.812 = 200 + 0.8 + 0.01 + 0.002$

$$= 2 \text{ Hundreds} + 8 \text{ Tenths} + 1 \text{ Hundredth} + 2 \text{ Thousandths}$$

The above information, we can give in place value Table:

	Hund- reds (100)	Tens (10)	Ones (1)	Ten- ths $\left(\frac{1}{10}\right)$	Hund- redths $\left(\frac{1}{100}\right)$	Thous- andths $\left(\frac{1}{1000}\right)$
(a)	0	0	0	2	9	0
(b)	0	0	2	0	8	0
(c)	0	1	9	6	0	0
(d)	1	4	8	3	2	0
(e)	2	0	0	8	1	2

Q4. Write each of the following as decimals.

(a)  $20 + 9 + \frac{4}{10} + \frac{1}{100}$

(b)  $137 + \frac{5}{100}$

(c)  $\frac{7}{10} + \frac{6}{100} + \frac{4}{1000}$

(d)  $23 + \frac{2}{10} + \frac{6}{1000}$

(e)  $700 + 20 + 5 + \frac{9}{100}$

Sol. (a)  $20 + 9 + \frac{4}{10} + \frac{1}{100} = 29 + 0.4 + 0.01 = 29.41$

(b)  $137 + \frac{5}{100} = 137 + 0.05 = 137.05$

(c)  $\frac{7}{10} + \frac{6}{100} + \frac{4}{1000} = 0.7 + 0.06 + 0.004 = 0.764$

(d)  $23 + \frac{2}{10} + \frac{6}{1000} = 23 + 0.2 + 0.006 = 23.206$

(e)  $700 + 20 + 5 + \frac{9}{100} = 725 + 0.09 = 725.09$

Q5. Write each of the following decimals in words.

(a) 0.03      (b) 1.20      (c) 108.56

(d) 10.07      (e) 0.032      (f) 5.008

- Sol. (a) 0.03 = Zero point zero three  
 (b) 1.20 = One point two zero  
 (c) 108.56 = One hundred eight point fifty-six  
 (d) 10.07 = Ten point zero seven  
 (e) 0.032 = Zero point zero three two  
 (f) 5.008 = Five point zero zero eight
- Q6. Between which two numbers in tenths place on the number line does each of the given numbers lie?
- (a) 0.06      (b) 0.45      (c) 0.19  
 (d) 0.66      (e) 0.92      (f) 0.57
- Sol. (a) 0.06 lies between 0 and 0.1  
 (b) 0.45 lies between 0.4 and 0.5  
 (c) 0.19 lies between 0.1 and 0.2  
 (d) 0.66 lies between 0.6 and 0.7  
 (e) 0.92 lies between 0.9 and 1.0  
 (f) 0.57 lies between 0.5 and 0.6
- Q7. Write as fraction in lowest terms.
- (a) 0.60      (b) 0.05      (c) 0.75      (d) 0.18  
 (e) 0.25      (f) 0.125      (g) 0.066

Sol. (a)  $0.60 = \frac{60}{100} = \frac{60 \div 20}{100 \div 20} = \frac{3}{5} \therefore 0.60 = \frac{3}{5}$   
 (b)  $0.05 = \frac{5}{100} = \frac{5 \div 5}{100 \div 5} = \frac{1}{20} \therefore 0.05 = \frac{1}{20}$   
 (c)  $0.75 = \frac{75}{100} = \frac{75 \div 25}{100 \div 25} = \frac{3}{4} \therefore 0.75 = \frac{3}{4}$   
 (d)  $0.18 = \frac{18}{100} = \frac{18 \div 2}{100 \div 2} = \frac{9}{50} \therefore 0.18 = \frac{9}{50}$   
 (e)  $0.25 = \frac{25}{100} = \frac{25 \div 25}{100 \div 25} = \frac{1}{4} \therefore 0.25 = \frac{1}{4}$   
 (f)  $0.125 = \frac{125}{1000} = \frac{125 \div 25}{1000 \div 25} = \frac{5}{40}$   
 $\frac{5 \div 5}{40 \div 5} = \frac{1}{8} \therefore 0.125 = \frac{1}{8}$   
 (g)  $0.066 = \frac{66}{1000} = \frac{66 \div 2}{1000 \div 2} = \frac{33}{500}$   
 $\therefore 0.066 = \frac{33}{500}$

### EXERCISE 8.3

- Q1. Which is greater?
- (a) 0.3 or 0.4      (b) 0.07 or 0.02  
 (c) 3 or 0.8      (d) 0.5 or 0.05  
 (e) 1.23 or 1.2      (f) 0.099 or 0.19  
 (g) 1.5 or 1.50      (h) 1.431 or 1.490  
 (i) 3.3 or 3.300      (j) 5.64 or 5.603

Sol. (a) 0.3 or 0.4

$$0.3 = \frac{3}{10} \text{ and } 0.4 = \frac{4}{10}$$

$$\text{Here, } \frac{3}{10} < \frac{4}{10}$$

$\therefore$  0.4 is greater than 0.3.

(b) 0.07 or 0.02

$$0.07 = \frac{7}{100} \text{ and } 0.02 = \frac{2}{100}$$

$$\text{Here, } \frac{7}{100} > \frac{2}{100}$$

$\therefore$  0.07 is greater than 0.02.

(c) 3 or 0.8

3 is greater than 0 and  $0 > 0.8$

$\therefore$  3 is greater than 0.8.

(d) 0.5 or 0.05

$$0.5 = 0.50 = \frac{50}{100} \text{ and } 0.05 = \frac{5}{100}$$

$$\text{Here, } \frac{50}{100} > \frac{5}{100}$$

$\therefore$  0.5 is greater than 0.05.

(e) 1.23 or 1.2

$$1.23 = \frac{123}{100} \text{ and } 1.2 = \frac{12}{10} = \frac{120}{100}$$

$$\text{Here, } \frac{123}{100} > \frac{120}{100}$$

$\therefore$  1.23 is greater than 1.2.

(f) 0.099 or 0.19

$$0.099 = \frac{99}{1000} \text{ and } 0.19 = \frac{19}{100} = \frac{190}{1000}$$

$$\text{Here, } \frac{99}{1000} < \frac{190}{1000}$$

$\therefore$  0.19 is greater than 0.099.

(g) 1.5 or 1.50

$$1.5 = \frac{1.5}{10} = \frac{150}{100} \text{ and } 1.50 = \frac{150}{100}$$

$$\text{Here, } \frac{150}{100} = \frac{150}{100}$$

$\therefore$  1.5 is equal to 1.50.

(h) 1.431 or 1.490

$$1.431 = \frac{1431}{1000} \text{ and } 1.490 = \frac{1490}{1000}$$

$$\text{Here, } \frac{1431}{1000} < \frac{1490}{1000}$$

$\therefore$  1.490 is greater than 1.431.

(i) 3.3 or 3.300

$$3.3 = 3.300 = \frac{3300}{1000}$$

$$\text{and } 3.300 = \frac{3300}{1000}$$

$$\text{Here, } \frac{3300}{1000} = \frac{3300}{1000}$$

∴ 3.3 is equal to 3.300.

(j) 5.64 or 5.603

$$5.64 = 5.640 = \frac{5640}{1000}$$

$$\text{and } 5.603 = \frac{5603}{1000}$$

$$\text{Here, } \frac{5640}{1000} > \frac{5603}{1000}$$

∴ 5.64 is greater than 5.603.

## TRY THESE (PAGE 175)

Q1. Write 2 rupees 5 paise and 2 rupees 50 paise in decimals.

Sol. (i) We know that 100 paise = ₹ 1

$$\therefore 1 \text{ paise} = ₹ \frac{1}{100}$$

$$\text{and } 5 \text{ paise} = ₹ \frac{5}{100}$$

$$\text{So, 2 rupees 5 paise} = ₹ 2 + ₹ \frac{5}{100}$$

$$= ₹ \left( 2 + \frac{5}{100} \right) = ₹ 2 + 0.05$$

$$= ₹ 2.05$$

(ii) We know that 100 paise = ₹ 1

$$\therefore 1 \text{ paise} = ₹ \frac{1}{100}$$

$$\text{and } 50 \text{ paise} = ₹ \frac{50}{100}$$

$$\text{So, 2 rupees 50 paise} = \left( ₹ 2 + ₹ \frac{50}{100} \right)$$

$$= ₹ \left( 2 + \frac{50}{100} \right) = ₹ (2 + 0.5)$$

$$= ₹ 2.50$$

Q2. Write 20 rupees 7 paise and 21 rupees 75 paise in decimals.

Sol. (i) 20 rupees 7 paise

We know that

$$100 \text{ paise} = ₹ 1$$

$$\therefore 1 \text{ paise} = ₹ \frac{1}{100}$$

$$\text{and } 7 \text{ paise} = ₹ \frac{7}{100}$$

$$\text{So, 20 rupees 7 paise} = \left( ₹ 20 + ₹ \frac{7}{100} \right)$$

$$= ₹ \left( 20 + \frac{7}{100} \right) = ₹ (20 + 0.07)$$

$$= ₹ 20.07$$

(ii) 21 rupees 75 paise

We know that 100 paise = ₹ 1

$$\therefore 1 \text{ paise} = ₹ \frac{1}{100}$$

$$\text{and } 75 \text{ paise} = ₹ \frac{75}{100}$$

$$\text{So, 21 rupees 75 paise} = ₹ 21 + ₹ \frac{75}{100}$$

$$= ₹ \left( 21 + \frac{75}{100} \right) = ₹ (21 + 0.75)$$

$$= ₹ 21.75$$

## TRY THESE (PAGE 176)

Q1. Can you write 4 mm in 'cm' using decimals?

Sol. Yes, we know that 10 mm = 1 cm

$$\therefore 1 \text{ mm} = \frac{1}{10} \text{ cm}$$

$$\text{So, } 4 \text{ mm} = \frac{4}{10} \text{ cm} = 0.4 \text{ cm}$$

Hence, 4 mm = 0.4 cm

Q2. How will you write 7 cm 5 mm in 'cm' using decimals?

Sol. 7 cm 5 mm

We know that

$$10 \text{ mm} = 1 \text{ cm}$$

$$\therefore 1 \text{ mm} = \frac{1}{10} \text{ cm}$$

$$\text{and } 5 \text{ mm} = \frac{5}{10} \text{ cm.}$$

$$\text{So, } 7 \text{ cm } 5 \text{ mm} = \left( 7 + \frac{5}{10} \right) \text{ cm} = (7 + 0.5) \text{ cm}$$

$$= 7.5 \text{ cm}$$

Q3. Can you now write 52 m as 'km' using decimals?

How will you write 340 m as 'km' using decimals?

How will you write 2008 m in 'km'?

Sol. 52 m as km

We know that 1000 m = 1 km

$$\therefore 1 \text{ m} = \frac{1}{1000} \text{ km}$$

$$\text{and } 52 \text{ m} = \frac{52}{1000} \text{ km.}$$

$$\text{So, } 52 \text{ m} = \frac{52}{1000} \text{ km or } 0.052 \text{ km}$$

Hence we can write 52 m as 0.052 km.



340 m as 'km'

We know that 1000 m = 1 km

$$\therefore 1 \text{ m} = \frac{1}{1000} \text{ km}$$

$$\text{and } 340 \text{ m} = \frac{340}{1000} \text{ km}$$

$$\text{So, } 340 \text{ m} = \frac{340}{1000} \text{ km} = 0.340 \text{ km}$$

Hence 340 m = 0.340 km

2008 m in 'km'

We know that 1000 m = 1 km

$$\therefore 1 \text{ m} = \frac{1}{1000} \text{ km}$$

$$\text{and } 2008 \text{ m} = \frac{2008}{1000} \text{ km}$$

$$\text{Hence } 2008 \text{ m} = \frac{2008}{1000} \text{ km} = 2.008 \text{ km.}$$

#### TRY THESE (PAGE 176)

Q1. Can you now write 456 g as kg using decimals?

Sol. Yes, we can write 456 g as kg.

We know that 1000 g = 1 kg

$$\therefore 1 \text{ g} = \frac{1}{1000} \text{ kg}$$

$$\text{and } 456 \text{ g} = \frac{456}{1000} \text{ kg}$$

$$\text{So, } 456 \text{ g} = \frac{456}{1000} \text{ kg or } 0.456 \text{ kg}$$

Q2. How will you write 2 kg 9 g in 'kg' using decimals?

Sol. 2 kg 9 g

We know that 1000 g = 1 kg

$$\therefore 1 \text{ g} = \frac{1}{1000} \text{ kg}$$

$$\text{and } 9 \text{ g} = \frac{9}{1000} \text{ kg}$$

$$\text{So, } 2 \text{ kg } 9 \text{ g} = 2 \text{ kg} + \frac{9}{1000} \text{ kg}$$

$$= \left( 2 + \frac{9}{1000} \right) \text{ kg}$$

$$= (2 + 0.009) \text{ kg}$$

$$= 2.009 \text{ kg.}$$

### EXERCISE 8.4

Q1. Express as rupees using decimals.

- (a) 5 paise                      (b) 75 paise  
(c) 20 paise                    (d) 50 rupees 90 paise  
(e) 725 paise

$$\text{Sol. (a) } 5 \text{ paise} = 5 \times \frac{1}{100} = 0.05 [\because 100 \text{ paise} = ₹ 1]$$

$$\text{So, } 5 \text{ paise} = ₹ 0.05$$

$$(b) 75 \text{ paise} = 75 \times \frac{1}{100} = 0.75$$

$$[\because 100 \text{ paise} = ₹ 1]$$

$$\text{So, } 75 \text{ paise} = ₹ 0.75$$

$$(c) 20 \text{ paise} = 20 \times \frac{1}{100} = 0.20$$

$$[\because 100 \text{ paise} = ₹ 1]$$

$$\text{So, } 20 \text{ paise} = ₹ 0.20$$

(d) 50 rupees 90 paise

$$= \left( ₹ 50 + ₹ \frac{90}{100} \right) = ₹ \left( 50 + \frac{0.90}{100} \right)$$

$$[\because 100 \text{ paise} = ₹ 1]$$

$$= ₹ (50 + 0.90)$$

$$\text{So, } 50 \text{ rupees } 90 \text{ paise} = ₹ 50.90$$

$$(e) 725 \text{ paise} = ₹ 725 \times \frac{1}{100}$$

$$[\because 100 \text{ paise} = ₹ 1]$$

$$= ₹ 7.25$$

$$\text{So, } 725 \text{ paise} = ₹ 7.25$$

Q2. Express as metres using decimals.

- (a) 15 cm                      (b) 6 cm  
(c) 2 m 45 cm              (d) 9 m 7 cm  
(e) 419 cm

$$\text{Sol. (a) } 15 \text{ cm} = 15 \times \frac{1}{100} \text{ m} = 0.15 \text{ m}$$

$$[\because 100 \text{ cm} = 1 \text{ m}]$$

$$\text{So, } 15 \text{ cm} = 0.15 \text{ m}$$

$$(b) 6 \text{ cm} = 6 \times \frac{1}{100} \text{ m} = 0.06 \text{ m}$$

$$[\because 100 \text{ cm} = 1 \text{ m}]$$

$$\text{So, } 6 \text{ cm} = 0.06 \text{ m}$$

$$(c) 2 \text{ m } 45 \text{ cm} = 2 \text{ m} + \frac{45}{100} \text{ m}$$

$$[\because 100 \text{ cm} = 1 \text{ m}]$$

$$= \left( 2 + \frac{45}{100} \right) \text{ m} = (2 + 0.45) \text{ m}$$

$$= 2.45 \text{ m}$$

$$\text{So, } 2 \text{ m } 45 \text{ cm} = 2.45 \text{ m}$$

$$(d) 9 \text{ m } 7 \text{ cm} = \left( 9 \text{ m} + \frac{7}{100} \text{ m} \right)$$

$$[\because 100 \text{ cm} = 1 \text{ m}]$$

$$= \left(9 + \frac{7}{100}\right) \text{ m} = (9 + 0.07) \text{ m}$$

$$= 9.07 \text{ m}$$

So, 9 m 7 cm = 9.07 m

$$(e) 419 \text{ cm} = 419 \times \frac{1}{100} \text{ m} \quad [\because 100 \text{ cm} = 1 \text{ m}]$$

$$= 4.19 \text{ m}$$

So, 419 cm = 4.19 m

**Q3. Express as cm using decimals.**

- (a) 5 mm                      (b) 60 mm  
 (c) 164 mm                (d) 9 cm 8 mm  
 (e) 93 mm

**Sol.** (a)  $5 \text{ mm} = 5 \times \frac{1}{10} = 0.5 \text{ cm} \quad [\because 10 \text{ mm} = 1 \text{ cm}]$

So, 5 mm = 0.5 cm

$$(b) 60 \text{ mm} = 60 \times \frac{1}{10} = 6.0 \text{ cm}$$

$$[\because 10 \text{ mm} = 1 \text{ cm}]$$

So, 60 mm = 6.0 cm

$$(c) 164 \text{ mm} = 164 \times \frac{1}{10} = 16.4 \text{ cm}$$

$$[\because 10 \text{ mm} = 1 \text{ cm}]$$

So, 164 mm = 16.4 cm

$$(d) 9 \text{ cm } 8 \text{ mm} = 9 \text{ cm} + 8 \times \frac{1}{10} \text{ cm}$$

$$[\because 10 \text{ mm} = 1 \text{ cm}]$$

$$= \left(9 + \frac{8}{10}\right) \text{ cm} = (9 + 0.8) \text{ cm}$$

$$= 9.8 \text{ cm}$$

So, 9 cm 8 mm = 9.8 cm.

$$(e) 93 \text{ mm} = 93 \times \frac{1}{10} \text{ cm} = 9.3 \text{ cm}$$

$$[\because 10 \text{ mm} = 1 \text{ cm}]$$

So, 93 mm = 9.3 cm.

**Q4. Express as km using decimals.**

- (a) 8 m                      (b) 88 m  
 (c) 8888 m                (d) 70 km 5 m

**Sol.** (a)  $8 \text{ m} = 8 \times \frac{1}{1000} = 0.008 \text{ km}$

$$[\because 1000 \text{ m} = 1 \text{ km}]$$

So, 8 m = 0.008 km

$$(b) 88 \text{ m} = 88 \times \frac{1}{1000} = 0.088 \text{ km}$$

$$[\because 1000 \text{ m} = 1 \text{ km}]$$

So, 88 m = 0.088 km

$$(c) 8888 \text{ m} = 8888 \times \frac{1}{1000} = 8.888 \text{ km}$$

$$[\because 1000 \text{ m} = 1 \text{ km}]$$

So, 8888 m = 8.888 km

$$(d) 70 \text{ km } 5 \text{ m} = \left(70 \text{ km} + \frac{5}{1000} \text{ km}\right)$$

$$[\because 1000 \text{ m} = 1 \text{ km}]$$

$$= \left(70 + \frac{5}{1000}\right) \text{ km}$$

$$= (70 + 0.005) \text{ km} = 70.005 \text{ km}$$

So, 70 km 5 m = 70.005 km.

**Q5. Express as kg using decimals.**

- (a) 2 g                      (b) 100 g                      (c) 3750 g  
 (d) 5 kg 8 g                (e) 26 kg 50 g

**Sol.** (a)  $2 \text{ g} = 2 \times \frac{1}{1000} \text{ kg} = 0.002 \text{ kg}$

$$[\because 1000 \text{ g} = 1 \text{ kg}]$$

So, 2 g = 0.002 kg

$$(b) 100 \text{ g} = 100 \times \frac{1}{1000} \text{ kg} = 0.100 \text{ kg}$$

$$[\because 1000 \text{ g} = 1 \text{ kg}]$$

So, 100 g = 0.100 kg

$$(c) 3750 \text{ g} = 3750 \times \frac{1}{1000} \text{ kg} = 3.750 \text{ kg}$$

$$[\because 1000 \text{ g} = 1 \text{ kg}]$$

So, 3750 g = 3.750 kg

$$(d) 5 \text{ kg } 8 \text{ g} = \left(5 \text{ kg} + \frac{8}{1000} \text{ kg}\right)$$

$$[\because 1000 \text{ g} = 1 \text{ kg}]$$

$$= \left(5 + \frac{8}{1000}\right) \text{ kg} = (5 + 0.008) \text{ kg}$$

$$= 5.008 \text{ kg}$$

So, 5 kg 8 g = 5.008 kg

$$(e) 26 \text{ kg } 50 \text{ g} = 26 \text{ kg} + \frac{50}{1000} \text{ kg}$$

$$[\because 1000 \text{ g} = 1 \text{ kg}]$$

$$= \left(26 + \frac{50}{1000}\right) \text{ kg}$$

$$= (26 + 0.050) \text{ kg} = 26.050 \text{ kg}$$

So, 26 kg 50 g = 26.050 kg

**TRY THESE (PAGE 178)**

**Q. Find:**

- (i)  $0.29 + 0.36$                       (ii)  $0.7 + 0.08$   
 (iii)  $1.54 + 1.80$                       (iv)  $2.66 + 1.85$

**Sol.** (i)  $0.29 + 0.36$

Adding the like decimals, we get

$$\begin{array}{r} 0.29 \\ + 0.36 \\ \hline 0.65 \end{array}$$

Hence,  $0.29 + 0.36 = 0.65$

(ii)  $0.7 + 0.08$

$= 0.70 + 0.08$  (Making like decimals)

Adding:  $0.70$

$+ 0.08$

$\underline{0.78}$

Hence,  $0.7 + 0.08 = 0.78$

(iii)  $1.54 + 1.80$

Adding the like decimals, we get

$1.54$

$+ 1.80$

$\underline{3.34}$

Hence,  $1.54 + 1.80 = 3.34$

(iv)  $2.66 + 1.85$

Adding the like decimals, we have

$2.66$

$+ 1.85$

$\underline{4.51}$

Hence,  $2.66 + 1.85 = 4.51$

**EXERCISE 3.5**

Q1. Find the sum in each of the following:

(a)  $0.007 + 8.5 + 30.08$

(b)  $15 + 0.632 + 13.8$

(c)  $27.076 + 0.55 + 0.004$

(d)  $25.65 + 9.005 + 3.7$

(e)  $0.75 + 10.425 + 2$

(f)  $280.69 + 25.2 + 38$

Sol. (a)  $0.007 + 8.5 + 30.08$ 

$= 0.007 + 8.500 + 30.080$

(making like decimals)

$= 38.587$

$0.007$

$8.500$

$+ 30.080$

$\underline{38.587}$

(b)  $15 + 0.632 + 13.8$

$= 15.000 + 0.632 + 13.800$

(making like decimals)

$= 29.432$

$15.000$

$0.632$

$\underline{13.800}$

$\underline{29.432}$

(c)  $27.076 + 0.55 + 0.004$

$= 27.076 + 0.550 + 0.004$

(making like decimals)

$= 27.630$

$27.076$

$0.550$

$+ 0.004$

$\underline{27.630}$

(d)  $25.65 + 9.005 + 3.7$

$= 25.650 + 9.005 + 3.700$

(making like decimals)

$= 38.355$

$25.650$

$9.005$

$+ 3.700$

$\underline{38.355}$

(e)  $0.75 + 10.425 + 2$

$= 0.750 + 10.425 + 2.000$

(making like decimals)

$= 13.175$

$0.750$

$10.425$

$+ 2.000$

$\underline{13.175}$

(f)  $280.69 + 25.2 + 38$

$= 280.69 + 25.20 + 38.00$

(making like decimals)

$= 343.89$

$280.69$

$25.20$

$+ 38.00$

$\underline{343.89}$

Q2. Rashid spent ₹ 35.75 for Maths book and ₹ 32.60 for Science book. Find the total amount spent by Rashid.

Sol. Money spent by Rashid for Maths book = ₹ 35.75

Money spent by Rashid for Science book = ₹ 32.60

 $\therefore$  Total money spent by Rashid on both books = ₹ 35.75 + ₹ 32.60

= ₹ 68.35

$35.75$

$+ 32.60$

$\underline{68.35}$

Q3. Radhika's mother gave her ₹ 10.50 and her father gave her ₹ 15.80, find the total amount given to Radhika by her parents.

Sol. Money given by Radhika's mother = ₹ 10.50

Money given by her father = ₹ 15.80

$$\begin{aligned} \therefore \text{Total money given to her by her parents} \\ &= ₹ 10.50 + ₹ 15.80 \\ &= ₹ 26.30 \end{aligned}$$

10.50
+ 15.80
26.30

Q4. Nasreen bought 3 m 20 cm cloth for her shirt and 2 m 5 cm cloth for her trouser. Find the total length of cloth bought by her.

Sol. Length of cloth bought by Nasreen for her shirt = 3 m 20 cm = 3.20 m  
Length of cloth bought by her for her trouser = 2 m 5 cm = 2.05 m  
Total length of cloth bought by her = 3.20 m + 2.05 m = 5.25 m

3.20
+ 2.05
5.25

Q5. Naresh walked 2 km 35 m in the morning and 1 km 7 m in the evening. How much distance did he walk in all?

Sol. Distance walked by Naresh in the morning = 2 km 35 m =  $\left(2 + \frac{35}{1000}\right)$  km = 2.035 km.  
Distance walked by him in the evening = 1 km 7 m =  $\left(1 + \frac{7}{1000}\right)$  km = 1.007 km  
 $\therefore$  Total distance walked by him in all = (2.035 + 1.007) km = 3.042 km

2.035
+ 1.007
3.042

Q6. Sunita travelled 15 km 268 m by bus, 7 km 7 m by car and 500 m on foot in order to reach her school. How far is her school from her residence?

Sol. Distance travelled by Sunita by bus = 15 km 268 m =  $\left(15 + \frac{268}{1000}\right)$  km = 15.268 km  
Distance travelled by her by car = 7 km 7 m =  $\left(7 + \frac{7}{1000}\right)$  km = 7.007 km

and distance travelled by her on foot = 500 m =  $\frac{500}{1000} = 0.500$  km

$\therefore$  Total distance travelled by her from her residence to school = 15.268 + 7.700 + 0.500 = 22.775 km

15.268
7.700
+ 0.500
22.775

Q7. Ravi purchased 5 kg 400 g rice, 2 kg 20 g sugar and 10 kg 850 g flour. Find the total weight of his purchases.

Sol. Weight of rice purchased by Ravi =  $5 + \frac{400}{1000} = 5.400$  kg  
Weight of sugar purchased by him =  $2 + \frac{20}{1000} = 2.020$  kg  
and weight of flour purchased by him =  $10 + \frac{850}{1000} = 10.850$  kg  
 $\therefore$  Total weight of his purchases = 5.400 kg + 2.020 kg + 10.850 kg = 18.270 kg

5.400
2.020
+ 10.850
18.270

#### TRY THESE (PAGE 180)

Q1. Subtract 1.85 from 5.46  
Sol. We have  $5.46 - 1.85 = 3.61$

5.46
- 1.85
3.61

Q2. Subtract 5.25 from 8.28  
Sol. We have  $8.28 - 5.25 = 3.03$

8.28
- 5.25
3.03

Q3. Subtract 0.95 from 2.29  
Sol. We have  $2.29 - 0.95 = 1.34$

2.29
- 0.95
1.34

Q4. Subtract 2.25 from 5.68  
Sol. We have  $5.68 - 2.25 = 3.43$

5.68
- 2.25
3.43

#### EXERCISE 8.6

Q1. Subtract:

- (a) ₹ 18.25 from ₹ 20.75  
(b) 202.54 m from 250 m  
(c) ₹ 5.36 from ₹ 8.40  
(d) 2.051 km from 5.206 km  
(e) 0.314 kg from 2.107 kg

Sol. (a) ₹ 18.25 from 20.75 = 20.75 - 18.25 = 2.50

20.75
- 18.25
2.50

(b) 202.54 m from 250 m = 250 m - 202.54 m = 250.00 m - 202.54 m = 47.46 m

250.00
- 202.54
47.46

$$\begin{array}{r} \text{(c) ₹ 5.36 from ₹ 8.40} \\ = ₹ 8.40 - ₹ 5.36 \\ = ₹ 3.04 \end{array}$$

$$\begin{array}{r} 8.40 \\ - 5.36 \\ \hline 3.04 \end{array}$$

$$\begin{array}{r} \text{(d) 2.051 km from 5.206 km} \\ = 5.206 \text{ km} - 2.051 \text{ km} \\ = 3.155 \text{ km} \end{array}$$

$$\begin{array}{r} 5.206 \\ - 2.051 \\ \hline 3.155 \end{array}$$

$$\begin{array}{r} \text{(e) 0.314 kg from 2.107 kg} \\ = 2.107 \text{ kg} - 0.314 \text{ kg} \\ = 1.793 \text{ kg} \end{array}$$

$$\begin{array}{r} 2.107 \\ - 0.314 \\ \hline 1.793 \end{array}$$

Q2. Find the value of:

$$\text{(a) } 9.756 - 6.28 \qquad \text{(b) } 21.05 - 15.27$$

$$\text{(c) } 18.5 - 6.79 \qquad \text{(d) } 11.6 - 9.847$$

$$\begin{array}{r} \text{Sol. (a) We have } 9.756 - 6.25 \\ = 9.756 - 6.250 \\ = 3.506 \end{array}$$

$$\begin{array}{r} 9.756 \\ - 6.250 \\ \hline 3.506 \end{array}$$

$$\begin{array}{r} \text{(b) We have } 21.05 - 15.27 \\ = 5.78 \end{array}$$

$$\begin{array}{r} 21.05 \\ - 15.27 \\ \hline 5.78 \end{array}$$

$$\begin{array}{r} \text{(c) We have } 18.5 - 6.79 \\ = 18.50 - 6.79 \\ = 11.71 \end{array}$$

$$\begin{array}{r} 18.50 \\ - 6.79 \\ \hline 11.71 \end{array}$$

$$\begin{array}{r} \text{(d) } 11.6 - 9.847 \\ = 11.600 - 9.847 \\ = 1.753 \end{array}$$

$$\begin{array}{r} 11.600 \\ - 9.847 \\ \hline 1.753 \end{array}$$

Q3. Raju bought a book for ₹ 35.65. He gave ₹ 50 to the shopkeeper. How much money did he get back from the shopkeeper?

$$\begin{array}{l} \text{Sol. Cost of book} = ₹ 35.65 \\ \text{Money paid by him to the shopkeeper} = ₹ 50 \\ \therefore \text{Money got back by him} \\ = ₹ 50 - ₹ 35.65 \\ = ₹ 50.00 - ₹ 35.65 \\ = ₹ 14.35 \end{array}$$

$$\begin{array}{r} 50.00 \\ - 35.65 \\ \hline 14.35 \end{array}$$

Q4. Rani had ₹ 18.50. She bought one ice-cream for ₹ 11.75. How much money does she have now?

$$\begin{array}{l} \text{Sol. Money Rani had ₹ 18.50} \\ \text{She bought ice-cream for ₹ 11.75} \\ \therefore \text{Money left with Rani} \\ = ₹ 18.50 - ₹ 11.75 \\ = ₹ 6.75 \end{array}$$

$$\begin{array}{r} 18.50 \\ - 11.75 \\ \hline 6.75 \end{array}$$

Q5. Tina had 20 m 5 cm long cloth. She cuts 4 m 50 cm length of cloth from this for making a curtain. How much cloth is left with her?

$$\begin{array}{l} \text{Sol. Length of cloth had by Tina} = 20 \text{ m } 5 \text{ cm} = 20.05 \text{ m} \\ \text{Length of cloth cut by her} = 4 \text{ m } 50 \text{ cm} \\ = 4.50 \text{ m} \end{array}$$

$$\begin{array}{l} \therefore \text{Length of cloth left with her} \\ = 20.05 \text{ m} - 4.50 \text{ m} \\ = 15.55 \text{ m} \end{array}$$

$$\begin{array}{r} 20.05 \\ - 4.50 \\ \hline 15.55 \end{array}$$

Q6. Namita travels 20 km 50 m every day. Out of this she travels 10 km 200 m by bus and the rest by auto. How much distance does she travel by auto?

$$\begin{array}{l} \text{Sol. Distance travelled by Namita daily} \\ = 20 \text{ km } 50 \text{ m or } 20.050 \text{ km} \\ \text{Distance travelled by her by bus} \\ = 10 \text{ km } 200 \text{ m or } 10.200 \text{ km} \\ \therefore \text{Distance travelled by her by auto} \\ = (20.050 - 10.200) \text{ km} \\ = 9.850 \text{ km} \end{array}$$

$$\begin{array}{r} 20.050 \\ - 10.200 \\ \hline 9.850 \end{array}$$

Q7. Aakash bought vegetables weighing 10 kg. Out of this, 3 kg 500 g is onions, 2 kg 75 g is tomatoes and the rest is potatoes. What is the weight of the potatoes?

$$\begin{array}{l} \text{Sol. Weight of vegetables bought by Aakash} = 10 \text{ kg} \\ \text{Weight of onions bought by him} = 3 \text{ kg } 500 \text{ g} \\ = 3.500 \text{ kg} \\ \text{and weight of tomatoes bought by him} \\ = 2 \text{ kg } 75 \text{ g} = 2.075 \text{ kg} \\ \therefore \text{Weight of potatoes} = \text{Weight of vegetable} - \\ \text{(weight of onions + weight of tomatoes)} \\ = 10.000 - (3.500 + 2.075) \\ = 10.000 - 5.575 = 4.425 \text{ kg} \end{array}$$

## Learning More Q & A

### I. VERY SHORT ANSWER (VSA) QUESTIONS

Q1. Write the following in decimals.  
5 hundreds 3 tens 8 ones 4 tenths

$$\begin{array}{l} \text{Sol. } 5 \text{ Hundreds} + 3 \text{ Tens} + 8 \text{ Ones} + 4 \text{ Tenths} \\ = 5 \times 100 + 3 \times 10 + 8 \times 1 + 4 \times \frac{1}{10} \\ = 500 + 30 + 8 + \frac{4}{10} \\ = 538 + \frac{4}{10} = 538.4 \end{array}$$

Q2. Write 14.3 in place value table.

Hundreds	Tens	Ones	Tenths
0	1	4	3

Q3. Write the following in decimals.

$$\text{(a) } \frac{3}{4} \qquad \text{(b) } \frac{2}{5}$$

$$\text{Sol. (a) } \frac{3}{4} = \frac{3 \times 25}{4 \times 25} = \frac{75}{100} = 0.75$$

$$(b) \frac{2}{5} = \frac{2 \times 2}{5 \times 2} = \frac{4}{10} = 0.4$$

Q4. Write the following as decimals.

(a) Three tens and eight-tenths

(b) Fifteen point seven

Sol. (a) Three tens and eight-tenths

$$= 3 \times 10 + 8 \times \frac{1}{10} = 30 + 0.8 = 30.8$$

(b) Fifteen point seven = 15.7

Q5. Write the following as decimals.

$$(a) 200 + 50 + 6 + \frac{2}{10} \quad (b) 150 + 30 + \frac{8}{10}$$

Sol. (a)  $200 + 50 + 6 + \frac{2}{10} = 256 + 0.2 = 256.2$

(b)  $150 + 30 + \frac{8}{10} = 180 + 0.8 = 180.8$

Q6. Write in decimals:

$$(a) \frac{5}{100} \quad (b) \frac{6}{1000}$$

Sol. (a)  $\frac{5}{100} = 0.05$       (b)  $\frac{6}{1000} = 0.006$

Q7. Write as fractions in lowest form.

$$(a) 0.05 \quad (b) 20.25$$

Sol. (a)  $0.05 = \frac{5}{100} = \frac{5 \div 5}{100 \div 5} = \frac{1}{20}$

(b)  $20.25 = 20 + 0.25 = 20 + \frac{25}{100} = 20 + \frac{1}{4} = 20\frac{1}{4}$

Q8. Write the following in decimals.

Three hundred six and seven hundredths.

Sol. Three hundred six and seven hundredths

$$\begin{aligned} &= 306 + \frac{7}{100} = 306 + 0 \times \frac{1}{10} + 7 \times \frac{1}{100} \\ &= 306 + 0.07 = 306.07 \end{aligned}$$

Q9. Which is greater 0.4 or 0.5?

Sol.  $0.4 = \frac{4}{10}$  and  $0.5 = \frac{5}{10}$

Here  $\frac{5}{10} > \frac{4}{10} \therefore 0.5 > 0.4$

Q10. Express the following as rupees using decimals:

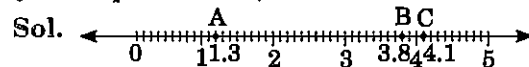
(a) 7 paise      (b) 625 paise

Sol. (a) 7 paise =  $7 \times \frac{1}{100}$  rupees  
 $[\because 100 \text{ paise} = ₹ 1]$   
 $= ₹ 0.07$

(b) 625 paise =  $625 \times \frac{1}{100}$   
 $[\because 100 \text{ paise} = ₹ 1]$   
 $= ₹ 6.25$

## II. SHORT ANSWER (SA) QUESTIONS

Q11. Represent 1.3, 3.8 and 4.1 on the number line.



A represents 1.3

B represents 3.8

and C represents 4.1

Q12. Read the numbers from the place value table and write them in decimals;

	Thous- ands (1000)	Hund- reds (100)	Tens (10)	Ones (1)	Ten- ths $(\frac{1}{10})$	Hund- redths $(\frac{1}{100})$
(a)	4	0	2	3	6	0
(b)	2	8	8	0	3	4
(c)	6	4	2	8	4	3

Sol. (a) 4 Thousands + 0 Hundreds + 2 Tens + 3 Ones + 6 Tenths + 0 Hundredths

$$\begin{aligned} &= 4 \times 1000 + 0 \times 100 + 2 \times 10 + 3 \times 1 + 6 \\ &\quad \times \frac{1}{10} + 0 \times \frac{1}{100} \end{aligned}$$

$$= 4000 + 0 + 20 + 3 + 0.6 + 0 = 4023.6$$

(b) 2 Thousands + 8 Hundreds + 8 Tens + 0 Ones + 3 Tenths + 4 Hundredths

$$\begin{aligned} &= 2 \times 1000 + 8 \times 100 + 8 \times 10 + 0 \times 1 + 3 \\ &\quad \times \frac{1}{10} + 4 \times \frac{1}{100} \end{aligned}$$

$$= 2000 + 800 + 80 + 0.3 + 0.04$$

$$= 2880 + 0.34 = 2880.34$$

(c) 6 Thousands + 4 Hundreds + 2 Tens + 8 Ones + 4 Tenths + 3 Hundredths

$$\begin{aligned} &= 6 \times 1000 + 4 \times 100 + 2 \times 10 + 8 \\ &\quad \times 1 + \frac{4}{10} + \frac{3}{100} \end{aligned}$$

$$= 6000 + 400 + 20 + 8 + 0.4 + 0.03$$

$$= 6428 + 0.43 = 6428.43$$

Q13. Write each of the following as decimals:

$$(a) \frac{8}{10} \quad (b) \frac{13}{100} \quad (c) \frac{256}{100} \quad (d) \frac{3}{1000}$$

Sol. (a)  $\frac{8}{10} = 0.8$       (b)  $\frac{13}{100} = 0.13$

(c)  $\frac{256}{100} = 25.6$       (d)  $\frac{3}{1000} = 0.003$

Q14. Convert the following unlike decimals into like decimals:

$$\frac{7}{10}, \frac{5}{50}, \frac{6}{5}, \frac{4}{20}$$

Sol. LCM of 10, 50, 5 and 20 = 100

$$\begin{aligned}\therefore \frac{7}{10} &= \frac{7 \times 10}{10 \times 10} = \frac{70}{100} \\ \frac{5}{50} &= \frac{5 \times 2}{50 \times 2} = \frac{10}{100} \\ \frac{6}{5} &= \frac{6 \times 20}{5 \times 20} = \frac{120}{100} \\ \frac{4}{20} &= \frac{4 \times 5}{20 \times 5} = \frac{20}{100}\end{aligned}$$

So, the equivalent like decimals are

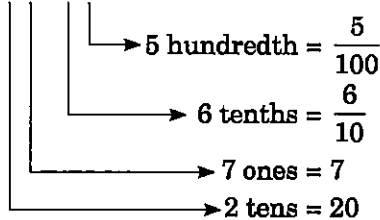
$$\frac{70}{100}, \frac{10}{100}, \frac{120}{100} \text{ and } \frac{20}{100} \text{ respectively.}$$

Q15. Write the following decimals in their expanded form:

- (a) 27.65                      (b) 102.05  
(c) 36.36                      (d) 0.507

Sol. (a) 27.65

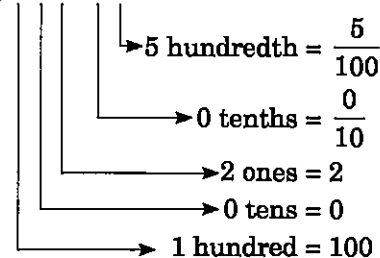
Here 27.65



Thus, expanded form of 27.65 =  $20 + 7 + \frac{6}{10} + \frac{5}{100}$

(b) 102.05

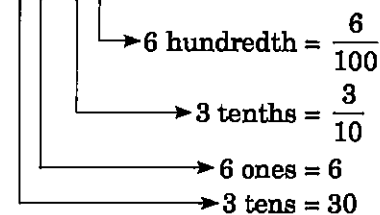
Here, 102.05



Thus, expanded form of 102.05 =  $100 + 2 + \frac{5}{100}$

(c) 36.36

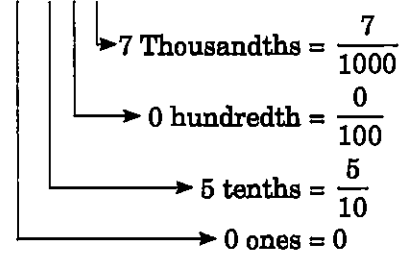
Here, 36.36



Thus, expanded form of 36.36 =  $30 + 6 + \frac{3}{10} + \frac{6}{100}$

(d) 0.507

Here, 0.507



$\therefore$  Expanded form of 0.507 =  $0 + \frac{5}{10} + \frac{7}{1000}$

Q16. Write each of the decimals as a mixed fraction.

- (a) 95.8                      (b) 15.78                      (c) 0.015                      (d) 19.91

Sol. (a)  $95.8 = 95 + 0.8 = 95 + \frac{8}{10} = 95 + \frac{4}{5} = 95\frac{4}{5}$

Thus  $95.8 = 95\frac{4}{5}$

(b)  $15.78 = 15 + 0.78 = 15 + \frac{78}{100} = 15 + \frac{39}{50} = 15\frac{39}{50}$

Thus,  $15.78 = 15\frac{39}{50}$

(c)  $0.015 = 0 + 0.015 = 0 + \frac{15}{1000} = \frac{15}{1000} = \frac{3}{200}$

Thus,  $0.015 = \frac{3}{200}$

(d)  $19.91 = 19 + \frac{91}{100} = 19\frac{91}{100}$

Thus,  $19.91 = 19\frac{91}{100}$

Q17. Express each of the following in terms of litres (L) using decimals:

- (a) 625 mL                      (b) 760 mL  
(c) 11 L 125 mL                      (d) 7 L 350 mL

Sol. (a) We know that 1000 mL = 1 L

$\therefore 625 \text{ mL} = \frac{625}{1000} \text{ L} = 0.625 \text{ L}$

Thus, 625 mL = 0.625 L

(b) We know that 1000 mL = 1 L

$\therefore 760 \text{ mL} = \frac{760}{1000} \text{ L}$   
 $= 0.760 \text{ L} = 0.76 \text{ L}$

Thus, 760 mL = 0.76 L

(c) We know that 1000 mL = 1 L

$\therefore 11 \text{ L } 125 \text{ mL} = 11 \text{ L} + \frac{125}{1000} \text{ L}$

$= (11 + 0.125) \text{ L} = 11.125 \text{ L}$

Thus, 11 L 125 mL = 11.125 L

(d) We know that  $1000 \text{ mL} = 1 \text{ L}$

$$\begin{aligned} \therefore 7 \text{ L } 350 \text{ mL} &= 7 \text{ L} + \frac{350}{1000} \text{ L} \\ &= (7 + 0.350) \text{ L} = 7.350 \text{ L} = 7.35 \text{ L} \\ \text{Thus, } 7 \text{ L } 350 \text{ mL} &= 7.35 \text{ L} \end{aligned}$$

Q18. Write 3.03, 2.75 and 2.5 in ascending order.

Sol. The given decimals are unlike.

$\therefore$  Their corresponding like decimals are 3.03, 2.75 and 2.50.

Now neglecting the decimals, we have 303, 275 and 250.

Since,  $303 > 275 > 250$ , we have

$$3.03 > 2.75 > 2.50$$

$\therefore$  Ascending order is  $2.50 < 2.75 < 3.03$

Q19. Find the value of the following:

(a)  $15 - 9.363$       (b)  $5.28 - 1.4 + 3.116$

Sol. (a) 
$$\begin{array}{r} 15.000 \\ - 9.363 \\ \hline 5.637 \end{array}$$

(b) 
$$\begin{array}{r} 5.280 \\ + 3.116 \\ \hline 8.396 \end{array} \quad \text{and} \quad \begin{array}{r} 8.396 \\ - 1.400 \\ \hline 6.996 \end{array}$$

Hence,  $5.28 - 1.4 + 3.116 = 6.996$

### III. HIGHER ORDER THINKING SKILLS (HOTS) QUESTIONS

Q20. Mr. Ranjan purchased 15.500 kg rice, 25.750 kg flour and 3.250 kg sugar. Find the total weight of his purchases. Is it 50 kg or less? If less, how much less?

Sol. Weight of rice = 15.500 kg  
Weight of flour = 25.750 kg  
Weight of sugar = 3.250 kg  
Total weight of this purchases  
 $= 15.500 \text{ kg} + 25.750 \text{ kg} + 3.250 \text{ kg}$   
 $= 44.500 \text{ kg}$

We see that the total weight of his purchases is less than 50 kg.

$$\begin{array}{r} 50.000 \\ - 44.500 \\ \hline 5.500 \text{ kg} \end{array}$$

Thus, the total weight 44.500 kg is 5.500 kg less than 50 kg.

Q21. Ten years old Rahul can carry a maximum weight of 15 kg. If he bought 4 kg 900 g of apples, 2 kg 600 g of grapes and 5 kg 300 g of mangoes. Can he carry the total weight that he bought. If yes, then how much more weight he can carry with him?

Sol. Weight of apples = 4 kg 900 g  
Weight of grapes = 2 kg 600 g  
Weight of mangoes = 5 kg 300 g  
 $\therefore$  Total weight of his purchases  
 $= 4 \text{ kg } 900 \text{ g} + 2 \text{ kg } 600 \text{ g} + 5 \text{ kg } 300 \text{ g}$   
 $= 4.900 \text{ kg} + 2.600 \text{ kg} + 5.300 \text{ kg}$   
 $= 12.800 \text{ kg}$

But Rahul can carry a maximum weight of 15 kg. Thus more weight that he can carry with him

$$\begin{array}{r} 15.000 \\ - 12.800 \\ \hline 2.200 \end{array}$$

## Test Yourself

### I. VERY SHORT ANSWER (VSA) QUESTIONS

1. Express the following without decimals.

(a) 3.005 km      (b) 0.2 cm

2. Write in words

(a) 1.45      (b) 0.18

3. Write in decimals:

(a)  $\frac{16}{25}$       (b)  $\frac{27}{50}$

4. Write in fractions (lowest form)

(a) 0.75      (b) 0.125

5. Write in decimal form

(a) Twenty-five tenths  
(b) One hundred fifteen thousandths

6. Draw a number line and show the following on it.

(a) 1.5      (b) 2.3

7. Express the following in terms of cm:

(a) 20 mm      (b) 625 mm

8. Express the following unlike decimals as like decimals.

(a) 2.05, 0.125 and 6.035

9. Which is greater 3.14 or 3.9?

10. Write the following as decimals:

(a)  $7 + \frac{7}{100}$       (b)  $31 + \frac{3}{10} + \frac{5}{100}$

### SHORT ANSWER (SA) QUESTIONS

11. Prepare a place value Table and write 7.2, 11.3 and 124.7 in it.

12. Between which two whole numbers on the number line do the following decimals lie?

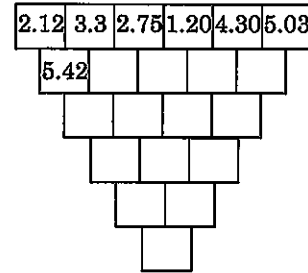
(a) 6.8      (b) 2.1      (c) 5.6      (d) 1.9



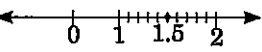
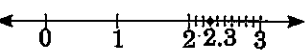
13. Write in expanded form:  
 (a) 13.653 (b) 5.003  
 (c) 16.053 (d) 0.305
14. Express the following as rupees using decimals:  
 (a) 75 paise (b) 7 paise  
 (c) 25 paise (d) 40 rupees 80 paise
15. Add:  
 (a) 77.777 + 6.066 (b) 38.009 + 28.901
16. Subtract 32.005 from 38.995.
17. Rani had ₹ 65.45. She bought toffees for ₹ 28.50. Find the balance amount left with her.
18. Convert the following in expanded form:  
 (a) 308.75 (b) 65.003  
 (c) 84.48 (d) 0.308
19. State True or False  
 (a) 4 kg 610 g = 4.61 kg  
 (b) 13 kg 015 g = 13.15 kg  
 (c) 10 m 60 cm = 10.6 m

- (d) ₹ 675 paise = ₹ 6.075  
 (e) ₹ 990 paise = ₹ 9.09  
 (f) 10 cm 08 mm = 10.8 cm  
 (g) 7 km 705 m = 7.75 km  
 (h) 7 L 150 mL = 7.015 L.

20. In this number pyramid, each number is the sum of the two numbers directly above it. Now complete this pyramid.



## ANSWERS

1. (a) 3005 m (b) 2 mm  
 2. (a) One point four five  
 (b) Zero point one eight  
 3. (a) 0.64 (b) 0.54  
 4. (a)  $\frac{3}{4}$  (b)  $\frac{1}{8}$   
 5. (a) 2.5 (b) 0.115  
 6. (a)   
 (b)   
 7. (a) 2.0 cm (b) 62.5 cm  
 8. 2.050, 0.125, 6.035 9. 3.9  
 10. (a) 7.07 (b) 31.35  
 11. 

	Hund- reds (100)	Tens (10)	Ones (1)	Tenths $\left(\frac{1}{10}\right)$	Hund- redths $\left(\frac{1}{100}\right)$
(a)	0	0	7	2	0
(b)	0	1	1	3	0
(c)	1	2	4	7	0

 12. (a) 6 and 7 (b) 2 and 3  
 (c) 5 and 6 (d) 1 and 2  
 13. (a)  $1 \times 10 + 3 \times 1 + 6 \times \frac{1}{10} + 5 \times \frac{1}{100} + 3 \times \frac{1}{1000}$   
 (b)  $5 \times 1 + 3 \times \frac{1}{1000}$

(c)  $1 \times 10 + 6 \times 1 + 5 \times \frac{1}{100} + 3 \times \frac{1}{1000}$

(d)  $\frac{3}{10} + \frac{5}{1000}$

14. (a) ₹ 0.75 (b) ₹ 0.07  
 (c) ₹ 0.25 (d) ₹ 40.80  
 15. (a) 83.843 (b) 66.910  
 16. 6.990 17. ₹ 36.95

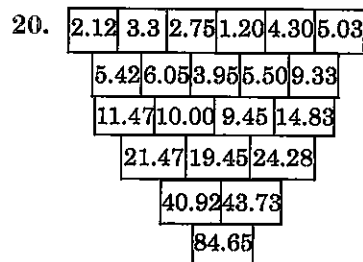
18. (a)  $3 \times 100 + 8 \times 1 + 7 \times \frac{1}{10} + 5 \times \frac{1}{100}$

(b)  $6 \times 10 + 5 \times 1 + \frac{3}{1000}$

(c)  $8 \times 10 + 4 \times 1 + 4 \times \frac{1}{10} + 8 \times \frac{1}{100}$

(d)  $3 \times \frac{1}{10} + 8 \times \frac{1}{1000}$

19. (a) T (b) F (c) T  
 (d) F (e) F (f) F  
 (g) F (h) F



## Internal Assessment

1. Complete the boxes with the given digits from 0 to 9.

(a)

$$\begin{array}{r} \square . \square \square \\ - \square . \square \square \\ \hline 4 . 3 6 \end{array}$$

(b)

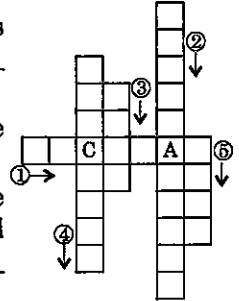
$$\begin{array}{r} \square \square . \square \\ + \square . \square \square \\ \hline 5 5 . 5 6 \end{array}$$

2. Find:

(a)  $12.37 - 4$       (b)  $5 - 2.175$

3. Complete the following crossword puzzle under the given directions.

- Every decimal number has two parts, whole number and \_\_\_\_\_ part.
- If a whole number is divided by 1000 equal parts then each part is called \_\_\_\_\_ of a unit.
- A decimal point is always put just after the \_\_\_\_\_ place.
- Every decimal can be written as a \_\_\_\_\_.
- Decimals having the same number of decimal place are called \_\_\_\_\_ decimals.



## ANSWERS

1. (a)

$$\begin{array}{r} \boxed{9} . \boxed{5} \boxed{7} \\ - \boxed{5} . \boxed{2} \boxed{1} \\ \hline \end{array}$$

(b)

$$\begin{array}{r} \boxed{4} \boxed{8} . \boxed{5} \\ + \boxed{7} . \boxed{0} \boxed{6} \\ \hline \end{array}$$

- (a) 8.37
- (1) DECIMAL
- (3) UNIT
- (5) LIKE

- (b) 2.825
- (2) THOUSANDTHS
- (4) FRACTION