

# Mathematics

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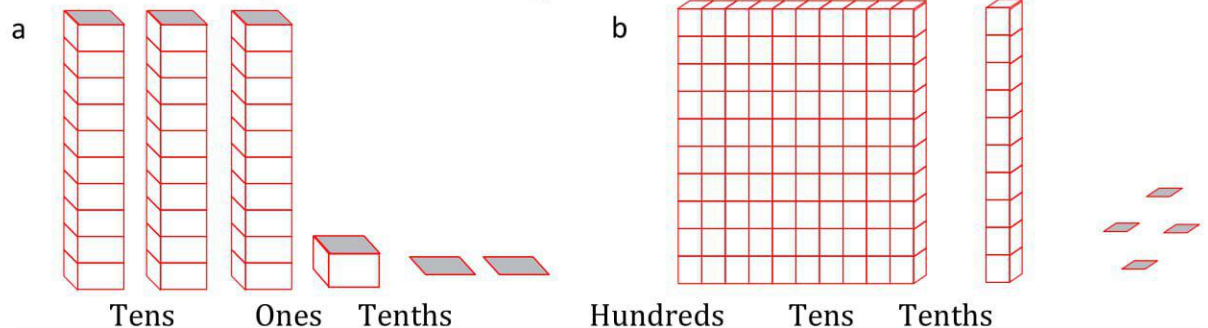
(Chapter – 8) (Decimals)

(Class – VI)

## Exercise 8.1

### Question 1:

Write the following as numbers in the given table:



| Hundreds<br>(100) | Tens<br>(10) | Ones<br>(1) | Tenths<br>$\left(\frac{1}{10}\right)$ |
|-------------------|--------------|-------------|---------------------------------------|
|                   |              |             |                                       |
|                   |              |             |                                       |

### Answer 1:

| Hundreds<br>(100) | Tens<br>(10) | Ones<br>(1) | Tenths<br>$\left(\frac{1}{10}\right)$ |
|-------------------|--------------|-------------|---------------------------------------|
| 0                 | 3            | 2           | 31.2                                  |
| 1                 | 1            | 4           | 110.4                                 |

### Question 2:

Write the following decimals in the place value table:

(a) 19.4

(b) 0.3

(c) 10.6

(d) 205.9

### Answer 2:

(a)

| Hundreds | Tens | Ones | Tenths |
|----------|------|------|--------|
| 0        | 1    | 9    | 4      |

(b)

| Hundreds | Tens | Ones | Tenths |
|----------|------|------|--------|
| 0        | 0    | 0    | 3      |

(c)

| Hundreds | Tens | Ones | Tenths |
|----------|------|------|--------|
| 0        | 1    | 0    | 6      |

(d)

| Hundreds | Tens | Ones | Tenths |
|----------|------|------|--------|
| 0        | 0    | 5    | 9      |

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(Chapter - 8) (Decimals)

(Class - VI)

## Question 3:

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



## Answer 3:

(a) seven-tenths = 7 tenths =  $\frac{7}{10} = 0.7$

(b) 2 tens and 9-tenths =  $2 \times 10 + \frac{9}{10} = 20 + 0.9 = 20.9$

(c) Fourteen point six = 14.6

(d) One hundred and 2-ones =  $100 + 2 \times 1 = 100 + 2 = 102$

(e) Six hundred point eight = 600.8

## Question 4:

Write each of the following as decimals:

(a)  $\frac{5}{10}$

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

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

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

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

(f)  $4\frac{2}{10}$

(g)  $\frac{3}{2}$

(h)  $\frac{2}{5}$

(i)  $\frac{12}{5}$

(j)  $3\frac{3}{5}$

(k)  $4\frac{1}{2}$



## Answer 4:

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

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

(c)  $200 + 60 + 5 + \frac{1}{10} = 200 + 60 + 5 + 0.1 = 265.1$

(d)  $70 + \frac{8}{10} = 70 + 0.8 = 70.8$  (e)  $\frac{88}{10} = \frac{80+8}{10} = \frac{80}{10} + \frac{8}{10} = 8 + \frac{8}{10} = 8 + 0.8 = 8.8$

(f)  $4\frac{2}{10} = 4 + \frac{2}{10} = 4 + 0.2 = 4.2$

(g)  $\frac{3}{2} = \frac{3 \times 5}{2 \times 5} = \frac{15}{10} = \frac{10+5}{10} = \frac{10}{10} + \frac{5}{10} = 1 + \frac{5}{10} = 1 + 0.5 = 1.5$

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

(i)  $\frac{12}{5} = \frac{12 \times 2}{5 \times 2} = \frac{24}{10} = \frac{20+4}{10} = \frac{20}{10} + \frac{4}{10} = 2 + \frac{4}{10} = 2 + 0.4 = 2.4$

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

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## Question 5:

Write the following decimals as fraction. Reduce the fractions to lowest terms:

(a) 0.6

(b) 2.5

(c) 1.0

(d) 3.8

(e) 13.7

(f) 21.2

(g) 6.4

## Answer 5:

$$(a) 0.6 = \frac{\cancel{6}}{\cancel{10}} = \frac{3}{5}$$

$$(b) 2.5 = \frac{\cancel{25}}{\cancel{10}} = \frac{5}{2}$$

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

$$(d) 3.8 = \frac{\cancel{38}}{\cancel{10}} = \frac{19}{5}$$

$$(e) 13.7 = \frac{137}{10}$$

$$(f) 21.2 = \frac{\cancel{212}}{\cancel{10}} = \frac{106}{5}$$

$$(g) 6.4 = \frac{\cancel{64}}{\cancel{10}} = \frac{32}{5}$$

## Question 6:

Express the following as cm using decimals:

(a) 2 mm

(b) 30 mm

(c) 116 mm

(d) 4 cm 2 mm

(e) 162 mm

(f) 83 mm

## Answer 6:

(a)  $\because 10 \text{ mm} = 1 \text{ cm}$

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

$$\therefore 2 \text{ mm} = \frac{1}{10} \times 2 = 0.2 \text{ cm}$$

(b)  $\because 10 \text{ mm} = 1 \text{ cm}$

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

$$\therefore 30 \text{ mm} = \frac{1}{10} \times 30 = 3.0 \text{ cm}$$

(c)  $\because 10 \text{ mm} = 1 \text{ cm}$

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

$$\therefore 116 \text{ mm} = \frac{1}{10} \times 116 = 11.6 \text{ cm}$$

(d)  $4 \text{ cm} + \frac{2}{10} \text{ cm} \quad [\because 10 \text{ mm} = 1 \text{ cm}]$

$$4 + 0.2 = 4.2 \text{ cm}$$

(e)  $\because 10 \text{ mm} = 1 \text{ cm}$

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

$$\therefore 162 \text{ mm} = \frac{1}{10} \times 162 = 16.2 \text{ cm}$$

(f)  $\because 10 \text{ mm} = 1 \text{ cm}$

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

$$\therefore 83 \text{ mm} = \frac{1}{10} \times 83 = 8.3 \text{ cm}$$

## Question 7:

Between which two whole numbers on the number line are the given 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

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## Answer 7:

- (a) From 0 to 1, 0.8 is nearest to 1.
- (b) From 5 to 6, 5.1 is nearest to 5.
- (c) From 2 to 3, 2.6 is nearest to 3.
- (d) From 6 to 7, 6.4 is nearest to 6.
- (e) From 9 to 10, 9.1 is nearest to 9.
- (f) From 4 to 5, 4.9 is nearest to 5.

## Question 8:

Show the following numbers on the number line:

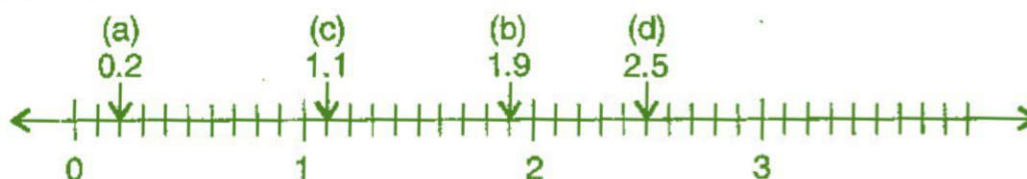
(a) 0.2

(b) 1.9

(c) 1.1

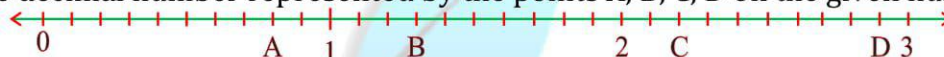
(d) 2.5

## Answer 8:



## Question 9:

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



## Answer 9:

$$A = 0 + \frac{8}{10} = 0.8$$

$$B = 1 + \frac{3}{10} = 1.3$$

$$C = 2 + \frac{2}{10} = 2.2$$

$$D = 2 + \frac{9}{10} = 2.9$$

## Question 10:

- (a) The length of Ramesh's notebook is 9 cm and 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.

## Answer 10:

$$(a) 9 \text{ cm } 5 \text{ mm} = 9 \text{ cm} + 5 \text{ mm} = 9 + \frac{5}{10} = 9.5 \text{ cm}$$

$$(b) 65 \text{ mm} = \frac{65}{10} \text{ cm} = 6.5 \text{ cm}$$