



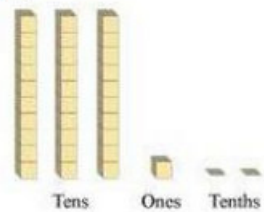
NCERT SOLUTIONS FOR CLASS 6 MATHS DECIMALS EXERCISE 8.1

Exercise 8.1

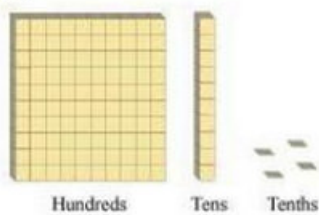
Question 1:

Write the following as numbers in the given table.

(a)



(b)



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

Answer:

It may be observed that

Row	Hundreds	Tens	Ones	Tenths
a.	0	3	1	2
b.	1	1	0	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:

Decimal	Hundreds	Tens	Ones	Tenths
19.4	0	1	9	4
0.3	0	0	0	3
10.6	0	1	0	6
205.9	2	0	5	9

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:

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

(b) Two tens and nine-tenths = $20 + \frac{9}{10} = 20.9$

(c) Fourteen point six = 14.6

(d) One hundred and two ones = $100 + 2 = 102.0$

(e) Six hundred point eight = 600.8

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:

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

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

$$(c) \quad 200 + 60 + 5 + \frac{1}{10} = 265 + 0.1 = 265.1$$

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

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

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

$$(g) \quad \frac{3}{2} = \frac{2+1}{2} = \frac{2}{2} + \frac{1}{2} = 1 + 0.5 = 1.5$$

$$(h) \quad \frac{2}{5} = 0.4$$

$$(i) \quad \frac{12}{5} = \frac{10+2}{5} = \frac{10}{5} + \frac{2}{5} = 2 + 0.4 = 2.4$$

$$(j) \quad 3\frac{3}{5} = 3 + \frac{3}{5} = 3 + 0.6 = 3.6$$

$$(k) \quad 4\frac{1}{2} = 4 + \frac{1}{2} = 4 + 0.5 = 4.5$$

Question 5:

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

(a) 0.6 (b) 2.5 (c) 1.0 (d) 3.8

(e) 13.7 (f) 21.2 (g) 6.4

Answer:

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

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

$$(c) \quad 1.0 = 1$$

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

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

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

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

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:

It is known that 1 cm = 10 mm

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

$$(b) \quad 30 \text{ mm} = \frac{30}{10} \text{ cm} = 3.0 \text{ cm}$$

$$(c) \quad 116 \text{ mm} = \frac{116}{10} \text{ cm} = 11.6 \text{ cm}$$

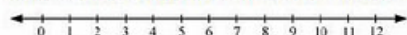
$$(d) \quad 4 \text{ cm } 2 \text{ mm} = \left(4 + \frac{2}{10} \right) \text{ cm} = 4.2 \text{ cm}$$

$$(e) \quad 162 \text{ mm} = \frac{162}{10} \text{ cm} = 16.2 \text{ cm}$$

$$(f) \quad 83 \text{ mm} = \frac{83}{10} \text{ cm} = 8.3 \text{ cm}$$

Question 7:

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

Answer:

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

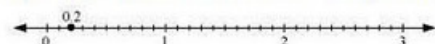
Question 8:

Show the following numbers on the number line.

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

Answer:

- (a) 0.2 represents a point between 0 and 1 on number line, such that the space between 0 and 1 is divided into 10 equal parts. Hence, each equal part will be equal to one-tenth. Now, 0.2 is the second point between 0 and 1.



- (b) 1.9 represents a point between 1 and 2 on number line, such that the

space between 1 and 2 is divided into 10 equal parts. Hence, each equal part will be equal to one-tenth. Now, 1.9 is the ninth point between 1 and 2.



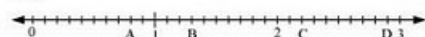
- (c) 1.1 represents a point between 1 and 2 on number line, such that the space between 1 and 2 is divided into 10 equal parts. Hence, each equal part will be equal to one-tenth. Now, 1.1 is the first point between 1 and 2.



- (d) 2.5 represents a point between 2 and 3 on number line, such that the space between 2 and 3 is divided into 10 equal parts. Hence, each equal part will be equal to one-tenth. Now, 2.5 is the fifth point between 2 and 3.

**Question 9:**

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



Answer:

- Point A represents 0.8.
Point B represents 1.3.
Point C represents 2.2.
Point D represents 2.9.

Question 10:

- (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.

Answer:

- (a) The length of Ramesh's notebook is 9 cm 5 mm.

Therefore, the length in cm is $\left(9 + \frac{5}{10}\right)$ cm = 9.5 cm

- (b) The length of a gram plant is 65 mm.

Therefore, the length in cm is $\frac{65}{10}$ = 6.5 cm

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