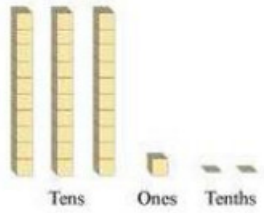
NCERT SOLUTIONS FOR CLASS 6 MATHS DECIMALS EXERCISE 8.1

Exercise 8.1

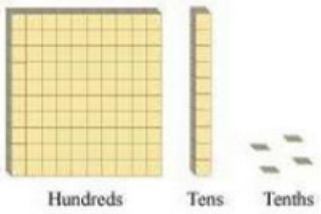
Question 1:

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

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

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

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

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

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

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

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

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

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

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

(c) 1.0 = 1

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

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

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

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

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 1cm = 10 mm

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

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

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

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

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

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

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

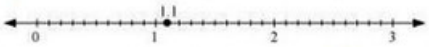
(c) 1.1 (d) 2.5

Answer:

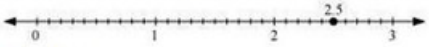
(a) 0.2 represents a point between 0 and 1 on number line, such that the space between 0 and 1 is divided into 10 equal parts. Hence, each equal part will be equal to one-tenth. Now, 0.2 is the second point between 0 and 1.

(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 $\left(9+\frac{5}{10}\right)\text{ cm} = 9.5\text{ cm}$

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

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

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