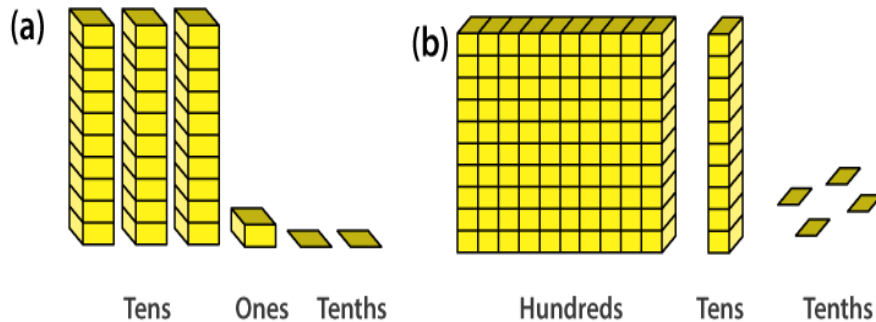


EXERCISE 8.1

PAGE NO: 167

1. Write the following numbers in the given table.



Hundreds	Tens	Ones	Tenths
(100)	(10)	(1)	(1 / 10)

Solutions:

Rows	Hundreds	Tens	Ones	Tenths
a	0	3	1	2
b	1	1	0	4

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

(a) 19.4

(b) 0.3

(c) 10.6

(d) 205.9

Solutions:

	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

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

Solutions:

(a) The decimal form of Seven-tenths is $7 / 10 = 0.7$

(b) The decimal form of two tens and nine tenths is $20 + 9 / 10 = 20.9$

- (c) The decimal form of fourteen point six is 14.6
 (d) The decimal form of one hundred and two ones is $100 + 2 = 102.0$
 (e) The decimal form of six hundred point eight is 600.8

4. Write each of the following as decimals:

- (a) $5 / 10$
 (b) $3 + 7 / 10$
 (c) $200 + 60 + 5 + 1 / 10$
 (d) $70 + 8 / 10$
 (e) $88 / 10$

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

(g) $3 / 2$

(h) $2 / 5$

(i) $12 / 5$

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

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

Solutions:

(a) $5 / 10 = 0.5$

(b) $3 + 7 / 10 = 3 + 0.7$
 $= 3.7$

(c) $200 + 60 + 5 + 1 / 10 = 265 + 0.1$
 $= 265.1$

(d) $70 + 8 / 10 = 70 + 0.8$
 $= 70.8$

(e) $88 / 10 = 80 / 10 + 8 / 10$
 $= 8 + 0.8$
 $= 8.8$

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

(g) $3 / 2 = (2 + 1) / 2$
 $= 2 / 2 + 1 / 2$
 $= 1 + 0.5$
 $= 1.5$

(h) $2 / 5 = 0.4$

(i) $12 / 5 = (10 + 2) / 5$
 $= 10 / 5 + 2 / 5$
 $= 2 + 0.4$
 $= 2.4$

(j)

$$\begin{aligned}3\frac{3}{5} &= 3 + \frac{3}{5} \\ &= 3 + 0.6 \\ &= 3.6\end{aligned}$$

(k)

$$\begin{aligned}4\frac{1}{2} &= 4 + \frac{1}{2} \\ &= 4 + 0.5 \\ &= 4.5\end{aligned}$$

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

(a) 0.6

(b) 2.5

(c) 1.0

(d) 3.8

(e) 13.7

(f) 21.2

(g) 6.4

Solutions:

(a) $0.6 = 6 / 10$

$$= 3 / 5$$

(b) $2.5 = 25 / 10$

$$= 5 / 2$$

(c) $1.0 = 1$

$$= 1$$

(d) $3.8 = 38 / 10$

$$= 19 / 5$$

(e) $13.7 = 137 / 10$

(f) $21.2 = 212 / 10$

$$= 106 / 5$$

(g) $6.4 = 64 / 10$

$$= 32 / 5$$

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

Solutions:

We know that

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

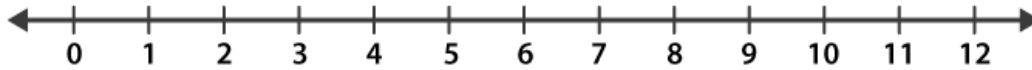
$$1 \text{ mm} = 1 / 10 \text{ cm}$$

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

$$= 0.2 \text{ cm}$$

- (b) $30 \text{ mm} = 30 / 10 \text{ cm}$
 $= 3.0 \text{ cm}$
- (c) $116 \text{ mm} = 116 / 10 \text{ cm}$
 $= 11.6 \text{ cm}$
- (d) $4 \text{ cm } 2 \text{ mm} = [(4 + 2 / 10)] \text{ cm}$
 $= 4.2 \text{ cm}$
- (e) $162 \text{ mm} = 162 / 10 \text{ cm}$
 $= 16.2 \text{ cm}$
- (f) $83 \text{ mm} = 83 / 10 \text{ cm}$
 $= 8.3 \text{ cm}$

**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

Solutions:

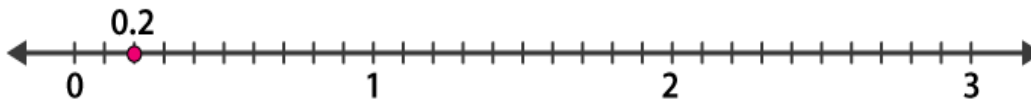
- (a) 0.8 lies between 0 and 1
0.8 is nearer to 1
- (b) 5.1 lies between 5 and 6
5.1 is nearer to 5
- (c) 2.6 lies between 2 and 3
2.6 is nearer to 3
- (d) 6.4 lies between 6 and 7
6.4 is nearer to 6
- (e) 9.1 lies between 9 and 10
9.1 is nearer to 9
- (f) 4.9 lies between 4 and 5
4.9 is nearer to 5

8. Show the following numbers on the number line.

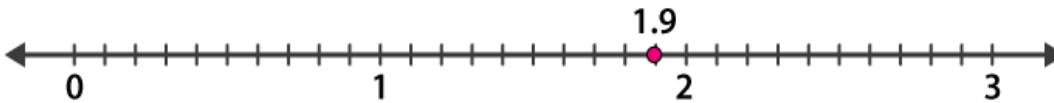
- (a) 0.2
(b) 1.9
(c) 1.1
(d) 2.5

Solutions:

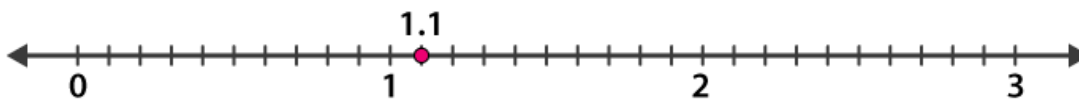
(a) 0.2 lies between the points 0 and 1 on the number line. The space between 0 and 1 is divided into 10 equal parts. Therefore each equal part will be equal to one-tenth. 0.2 is the second point between 0 and 1



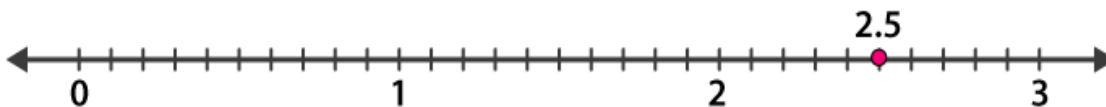
(b) 1.9 lies between the points 1 and 2 on the number line. The space between 1 and 2 is divided into 10 equal parts. Therefore each equal part will be equal to one-tenth. 1.9 is the ninth point between 1 and 2



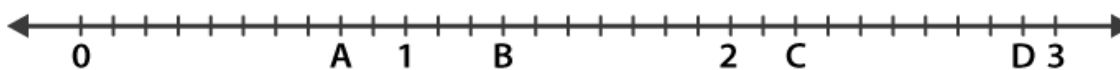
(c) 1.1 lies between the points 1 and 2 on the number line such that the space between 1 and 2 is divided into 10 equal parts. Therefore each equal part will be equal to one-tenth. 1.1 is the first point between 1 and 2



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



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



Solutions:

- (a) Point A represents 0.8 cm on the given number line.
- (b) Point B represents 1.3 cm on the given number line
- (c) Point C represents 2.2 cm on the given number line
- (d) Point D represents 2.9 cm on the given number line

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.

Solutions:

- (a) The length of Ramesh notebook is 9 cm 5 mm
The length in cm is $[(9 + 5 / 10)]$ cm
= 9.5 cm
- (b) The length of a gram plant is 65 mm
Hence, the length in cm is $65 / 10$
= 6.5 cm