

**EXERCISE 6**

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**1. Fill in the blanks:**

- (i) Negative of -20 is .....
- (ii) Negative of 0 is .....
- (iii) Negative of 8 is .....
- (iv) If 10 represents gain of ₹ 10, then -10 represents .....
- (v) If going south is negative then going north is .....
- (vi) Because  $5 < 7$ , therefore -5 ..... -7.
- (vii) If  $3 > -2$ , then 3 is on the ..... of -2.
- (viii) If  $-8 < -6$ , then -8 is on the ..... of -6.

**Solution:**

- (i) Negative of -20 is 20
- (ii) Negative of 0 is 0
- (iii) Negative of 8 is -8
- (iv) If 10 represents gain of ₹ 10, then -10 represents loss of ₹ 10
- (v) If going south is negative then going north is positive
- (vi) Because  $5 < 7$ , therefore -5 less than -7
- (vii) If  $3 > -2$ , then 3 is on the right side of -2
- (viii) If  $-8 < -6$ , then -8 is on the left side of -6

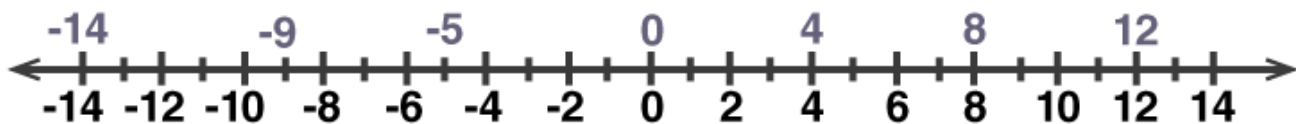
**2. Use a number line to write the following integers in ascending (increasing) order:**

- (i) -5, 8, 0, -9, 4, -14 and 12
- (ii) -6, 7, 0, -9, 5 and 9

**Solution:**

- (i) -5, 8, 0, -9, 4, -14 and 12

Draw a number line for given integers and mark on it all the integers as shown below

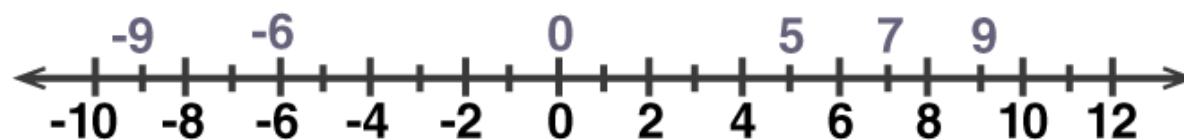


Hence, the given integers in the ascending order are:

$$-14 < -9 < -5 < 0 < 4 < 8 < 12$$

- (ii) -6, 7, 0, -9, 5 and 9

Draw a number line for given integers and mark on it all the integers as shown below



Hence, the given integers in the ascending order are:

$$-9 < -6 < 0 < 5 < 7 < 9$$

3. Use a number line to write the following integers in descending (decreasing) order:

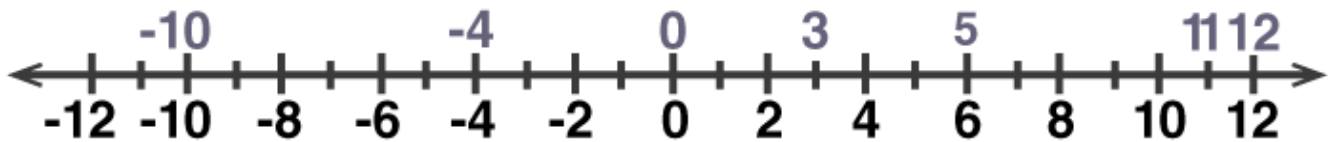
(i) -10, 0, 3, -4, 12, 11, -1 and 5

(ii) -4, 3, -8, -12, -7 and 6

**Solution:**

(i) -10, 0, 3, -4, 12, 11, -1 and 5

Draw a number line for the given integers and mark on it all the integers as shown below

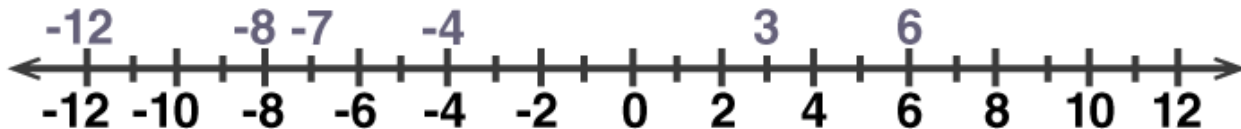


Hence, the given integers in the descending order are:

$$12 > 11 > 5 > 3 > 0 > -1 > -4 > -10$$

(ii) -4, 3, -8, -12, -7 and 6

Draw a number line for the given integers and mark on it all the integers as shown below



Hence, the given integers in the descending order are:

$$6 > 3 > -4 > -7 > -8 > -12$$

4. Add:

(i) 13 and 15

(ii) -13 and 15

(iii) 13 and -15

(iv) -13 and -15

**Solution:**

(i) 13 and 15

On adding these numbers, we get

$$13 + 15 = 28$$

(ii) -13 and 15

On adding these numbers, we get

$$(-13) + 15 = 2$$

(iii) 13 and -15

On adding these numbers, we get

$$13 + (-15) = 13 - 15$$

$$= -2$$

(iv) -13 and -15

On adding these numbers, we get

$$\begin{aligned}(-13) + (-15) &= -13 - 15 \\ &= -28\end{aligned}$$

**5. Add:**

(i) 259 and 214

(ii) -528 and -243

(iii) -623 and 326

(iv) 258 and -473

(v) -622 and -254

(vi) 257 and -254

**Solution:**

(i) 259 and 214

On adding, we get

$$\begin{aligned}&= 259 + 214 \\ &= 473\end{aligned}$$

(ii) -528 and -243

On adding, we get

$$\begin{aligned}&= -528 + (-243) \\ &= -528 - 243 \\ &= -771\end{aligned}$$

(iii) -623 and 326

On adding, we get

$$\begin{aligned}&= -623 + 326 \\ &= -297\end{aligned}$$

(iv) 258 and -473

On adding, we get

$$\begin{aligned}&= 258 + (-473) \\ &= 258 - 473 \\ &= -215\end{aligned}$$

(v) -622 and -254

On adding, we get

$$\begin{aligned}&= -622 + (-254) \\ &= -622 - 254 \\ &= -876\end{aligned}$$

(vi) 257 and -254

On adding, we get

$$= 257 + (-254)$$

$$= 257 - 254$$
$$= 3$$

**6. Subtract:****(i) 5 from 8****(ii) -5 from 8****(iii) 4 from -7****(iv) -8 from -2****(v) -3 from 12****(vi) -6 from -3****Solution:****(i) 5 from 8**

On subtracting, we get

$$= 8 - 5$$

$$= 3$$

**(ii) -5 from 8**

On subtracting, we get

$$= 8 - (-5)$$

$$= 8 + 5$$

$$= 13$$

**(iii) 4 from -7**

On subtracting, we get

$$= -7 - 4$$

$$= -11$$

**(iv) -8 from -2**

On subtracting, we get

$$= -2 - (-8)$$

$$= -2 + 8$$

$$= 6$$

**(v) -3 from 12**

On subtracting, we get

$$= 12 - (-3)$$

$$= 12 + 3$$

$$= 15$$

**(vi) -6 from -3**

On subtracting, we get

$$= -3 - (-6)$$

$$= -3 + 6$$

$$= 3$$

**7. Subtract:****(i) – 123 from 453****(ii) -78 from – 12****(iii) 329 from – 124****(iv) -222 from 0****Solution:****(i) – 123 from 453**

On subtracting, we get

$$= 453 - (-123)$$

$$= 453 + 123$$

$$= 576$$

**(ii) – 78 from -12**

On subtracting, we get

$$= -12 - (-78)$$

$$= -12 + 78$$

$$= 66$$

**(iii) 329 from -124**

On subtracting, we get

$$= -124 - 329$$

$$= -453$$

**(iv) –222 from 0**

On subtracting, we get

$$= 0 - (-222)$$

$$= 0 + 222$$

$$= 222$$