

# Negative Numbers and Integers

## EXERCISE 6

### Question 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) 20
- (ii) 0
- (iii) -8
- (iv) loss of ₹ 10
- (v) positive
- (vi) less than
- (vii) right side
- (viii) left side

### Question 2.

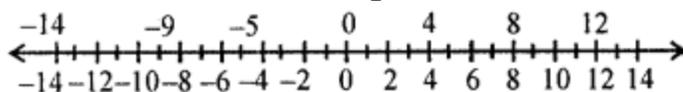
Use a number line to write the following integers in ascending (increasing) order :

- (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 integers,, as shown below, and mark on it all the given integers.

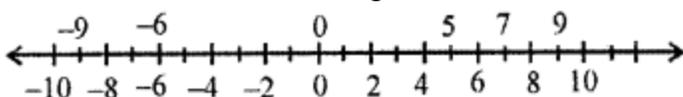


Clearly, the given integers in the ascending order are :

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

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

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



Clearly, the given integers in the ascending order are :

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

### Question 3.

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

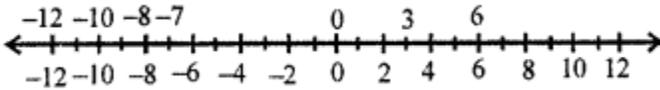
- (i) -10, 0, 3, -4, 12, 11, -1 and 5

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

**Solution:**

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

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

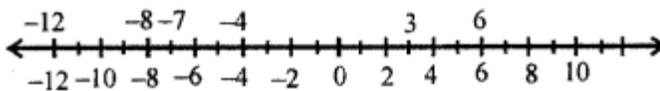


Clearly, the given integers in the descending order are :

$$6 > 3 > 0 > -7 > -8 > -10 > -12$$

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

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



Clearly, the given integers in the descending order are :

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

#### Question 4.

Add:

- (i) 13 and 15
- (ii) -13 and 15
- (iii) 13 and -15
- (iv) -13 and -15

**Solution:**

- (i) 13 and 15  
 $13 + 15 = 28$
- (ii) -13 and 15  
 $(-13) + 15 = 2$
- (iii) 13 and -15  
 $= (13) + (-15)$   
 $= 13 - 15 = -2$
- (iv) -13 and -15  
 $= (-13) + (-15)$   
 $= -13 - 15 = -28$

#### Question 5.

Add:

- (i) 259 from 214
- (ii) -528 and -243
- (iii) -623 and 326
- (iv) 258 and -473
- (v) -622 and -254
- (vi) 257 and -254

**Solution:**

- (i) 259 from 214  
 $= 259 + 214 = 473$

(ii) -528 and -243

$$= -528 + (-243)$$

$$= -528 - 243$$

$$= -771$$

(iii) -623 and 326

$$= -623 + 326 = -297$$

(iv) 258 and -473

$$= 258 + (-473)$$

$$= 258 - 473$$

$$= -215$$

(v) -622 and -254

$$= -622 + (-254)$$

$$= -622 - 254$$

$$= -876$$

(vi) 257 and -254

$$= 257 + (-254)$$

$$= 257 - 254$$

$$= 3$$

### Question 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

$$= 8 - 5 = 3$$

(ii) -5 from 8

$$= 8 - (-5)$$

$$= 8 + 5 = 13$$

(iii) 4 from -7

$$= -7 - 4$$

$$= -11$$

(iv) -8 from -2 =  $-2 - (-8)$

$$= -2 + 8$$

$$= 6$$

(v) -3 from 12

$$= -12 - 3 = -15$$

(vi) -6 from -3

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

$$= -3 + 6 = +3$$

**Question 7.**

Subtract:

(i) -123 from 453

(ii) -78 from -12

(iii) 329 and -124

(iv) -222 from 0

**Solution:**

(i) -123 from 453

$$= + 453 - (-123)$$

$$= 453 + 123 = 576$$

(ii) -78 from -12

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

$$= -12 + 78 = 66$$

(iii) 329 and -124

$$= + 329 - 124 = 205$$

(iv) -222 from 0

$$= 0 - (-222)$$

$$= 0 + 222 = 222$$

**Question 8.**

Using a number line, find the integer which is :

(i) 3 more than -1

(ii) 5 less than 2

(iii) 5 more than -9

(iv) 4 less than -4

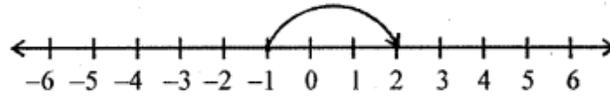
(v) 7 more than 0

(vi) 7 less than -8

**Solution:**

(i) 3 more than  $-1$

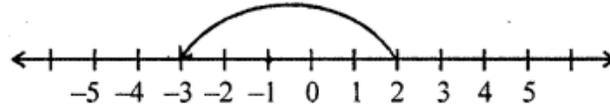
To get 3 more than  $-1$ , start from  $-1$  and then move 3 units to the right of  $-1$  to get 2.



$\therefore$  3 more than  $-1$  is 2 Ans.

(ii) 5 less than 2

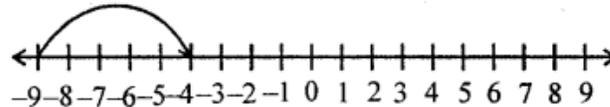
To get 5 less than 2, start from 2 and then move 5 units to the left of 2 to get  $-3$ .



$\therefore$  5 more than 2 is  $-3$  Ans.

(iii) 5 more than  $-9$

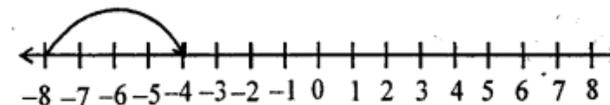
To get 5 more than  $-9$ , start from  $-9$  and then move  $-9$  units to the right of  $-9$  to get  $-4$ .



$\therefore$  5 more than  $-9$  is  $-4$  Ans.

(iv) 4 less than  $-4$

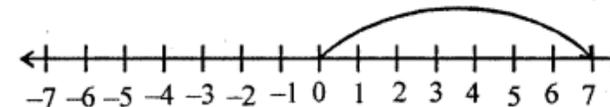
To get 4 less than  $-4$ , start from  $-4$  and then move 4 units to the left of  $-4$  to get  $-8$ .



$\therefore$  4 less than  $-4$  is  $-8$  Ans.

(v) 7 more than 0

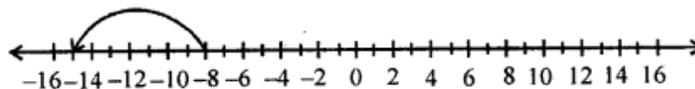
To get 7 more than 0, start from 7 and then move 7 and then move 7 units to the right of 7 to get 7.



$\therefore$  7 more than 0 is 7 Ans.

(vi) 7 less than  $-8$

To get 7 less than  $-8$ , start from  $-8$  and then move 7 units to the left of  $-8$  to get  $-15$ .



$\therefore$  7 less than  $-8$  is  $-15$  Ans.