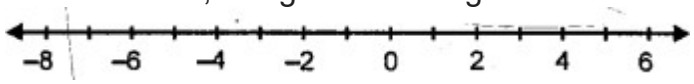
Number Line

EXERCISE 7(A)

Question 1.

Fill in the blanks, using the following number line :



(i) An integer, on the given number line, is .....than every number on its left.
(ii) An integer, on the given number line, is greater than every number to its ……..
(iii) 2 is greater than – 4 implies 2 is to the.....of – 4.
(iv) -3 is ……. than 2 and 3 is.....than – 2.
(v) – 4 is ……. than -8 and 4 is.....than 8.
(vi) 5 is ……. than 2 and -5 is..... than – 2.
(vii) -6 is ……. than 3 and the opposite of -6 is..... than opposite of 3.
(viii) 8 is ……. than -5 and -8 is ……. than -5.

Solution:

(i) An integer, on the given number line, is **greater** than every number on its left.
(ii) An integer, on the given number line, is greater than every number to its **left**.
(iii) 2 is **greater** than – 4 implies 2 is on the **right** of – 4.
(iv) – 3 is **less than** 2 and 3 is **greater** than -2.
(v) – 4 is **greater** than -8 and 4 is **less** than 8.
(vi) 5 is **greater** than 2 and – 5 is **less** than – 2.
(vii) -6 is **less** than 3 and the opposite of -6 is **greater** than opposite of 3.
(viii) 8 is **greater** than -5 and -8 is **less** than -5.

Question 2.

In each of the following pairs, state which integer is greater :
(i) -15, -23
(ii) -12, 15
(iii) 0, 8
(iv) 0, -3

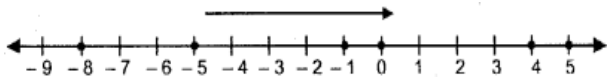
Solution:

(i) -15, -23
-15 is greater than -23 as -15 lies on the right side of-23 on the number line
(ii) -12, 15
15 is greater than than -12 as 15 lies on the right side of -12 on the number line
(iii) 0, 8 8 > 0
(iv) 0, -3 0 > – 3

Question 3.
In each of the following pairs, which integer is smaller :
(i) o, -6
(ii) 2, -3
(iii) 15, -51
(iv) 13, 0
Solution:
(i) 0, -6
-6 < 0
(ii) 2, -3
-3 < 2
(iii) 15, -51
-51 < 15
(iv) 13, 0
0 < 13

Question 4.
In each of the following pairs, replace * with < or > to make the statement true:
(i) 3 * 0
(ii) 0 * -8
(iii) -9 * -3
(iv) 3 * 3
(v) 5 * -1
(vi) -13 * 0
(vii) -8 * -18
(viii) 516 * -316
Solution:
(i) 3 > 0
(ii) 0 > -8
(iii) -9 < -3
(iv) -3 < 3
(v) 5 > -1
(vi) -13 < 0
(vii) -8 > -18
(viii) 516 > -316

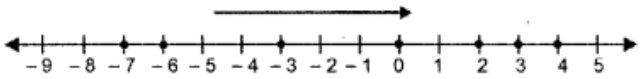
Question 5.
In each case, arrange the given integers in ascending order using a number line.
(i) – 8, 0, – 5, 5, 4, – 1
(ii) 3, – 3, 4, – 7, 0, – 6, 2
Solution:
(i) – 8, 0, – 5, 5, 4, – 1
Draw a number line and mark the numbers on it. Arranging in ascending order, as shown -8,-5,-1, 0, 4, 5 as on the number line



(ii) 3, -3, 4, -7, 0, -6, 2

Draw the number line and mark the numbers on it. Arranging in ascending order as shown on the number line.

-7, -6, -3, 0, 2, 3, 4



Question 6.

In each case, arrange the given integers in descending order using a number line.

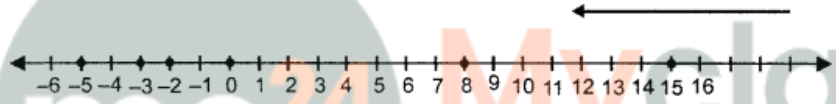
(i) -5, -3, 8, 15, 0, -2

(ii) 12, 23, -11, 0, 7, 6

Solution:

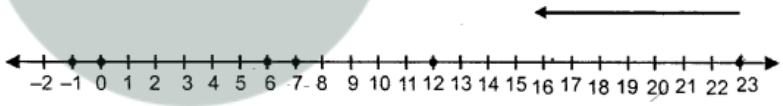
(i) -5, -3, 8, 15, 0, -2

Draw the number line and mark these numbers on it. Arranging in descending order 15, 8, 0 -2, -3, -5 as shown on the number line



(ii) 12, 23, -11, 0, 7, 6

Draw a number line and mark these numbers on it. Arranging in descending order. 23, 12, 7, 6, 0, -1 as shown on the number line



Question 7.

For each of the statements, given below, state whether it is true or false :

(i) The smallest integer is 0.

(ii) The opposite of -17 is 17.

(iii) The opposite of zero is zero.

(iv) Every negative integar is smaller than 0.

(v) 0 is greater than every positive integer.

(vi) Since, zero is neither negative nor positive ; it is not an integer.

Solution:

(i) False

(ii) True

(iii) True

(iv) True

(v) False

(vi) False