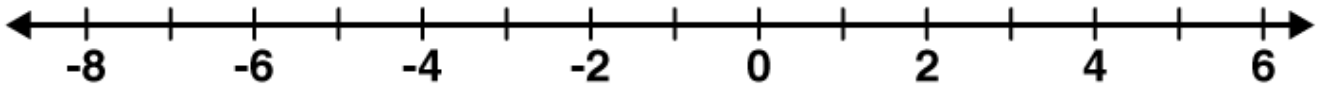
EXERCISE 7(A) PAGE NO: 55

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

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:

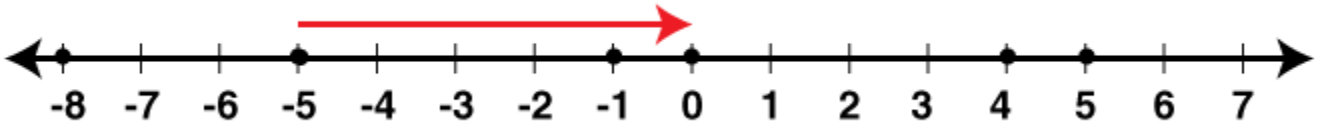
(i) -15, -23
-15 lies on the right side of -23 on the number line. Therefore, -15 is greater than -23
(ii) -12, 15
15 lies on the right side of -12 on the number line. Hence, 15 is greater than -12
(iii) 0, 8
8 lies right side of 0 on the number line. Therefore, 8 is greater than 0
(iv) 0, -3
0 lies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

3. In each of the following pairs, state which integer is smaller :
(i) 0, - 6
(ii) 2, - 3
(iii) 15, - 51
(iv) 13, 0
Solution:
(i) -6 lies on the left side of 0 on the number line. Hence, -6 is smaller than 0
(ii) -3 lies on the left side of 2 on the number line. Therefore, -3 is smaller than 2
(iii) -51 lies on the left side of 15 on the number line. Hence, -51 is smaller than 15
(iv) 0 lies on the left side of 13 on the number line. Therefore, 0 is smaller than 13

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
Solution:
(i) 3 lies on the right side of 0 on the number line
Hence, 3 is greater than 0
(ii) 0 lies on the right side of -8 on the number line
Therefore, 0 is greater than -8
(iii) -9 lies on the left side of -3 on the number line
Hence, -9 is smaller than -3
(iv) -3 lies on the left side of 3 on the number line
Therefore, -3 is smaller than 3
(v) 5 lies right side of -1 on the number line
Hence, 5 is greater than -1
(vi) -13 lies left side of 0 on the number line
Therefore, -13 is smaller than 0
(vii) -8 lies on the right side of -18 on the number line
Hence, -8 is greater than -18

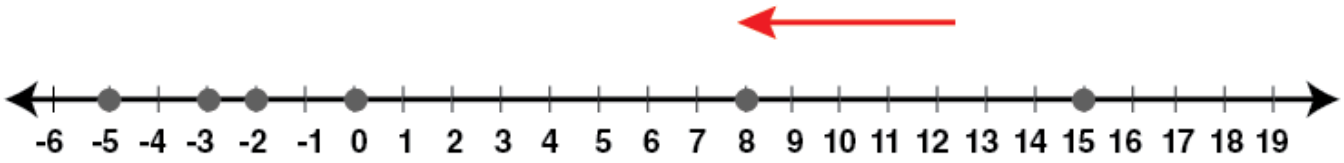
5. In each case, arrange the given integers in ascending order, using a number line:
(i) -8, 0, -5, 5, 4, -1
(ii) 3, -3, 4, -7, 0, -6, 2
Solution:

(i) -8, 0, -5, 5, 4, -1
Draw a number line and mark the given integers in ascending order as -8, -5, -1, 0, 4, 5 on the number line as shown below

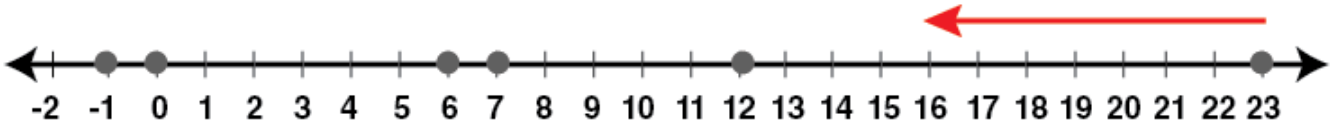


(ii) 3, -3, 4, -7, 0, -6, 2
Draw a number line and mark the given integers in ascending order as -7, -6, -3, 0, 2, 3, 4 on the number line as shown below

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 a number line and mark the given integers on it. Arranging these integers in descending order 15, 8, 0, -2, -3, -5 as shown below on the number line



(ii) 12, 23, -11, 0, 7, 6
Draw a number line and mark the given integers on it. Arranging these integers in descending order 23, 12, 7, 6, 0, -11 as shown below on the number line



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 integer 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