

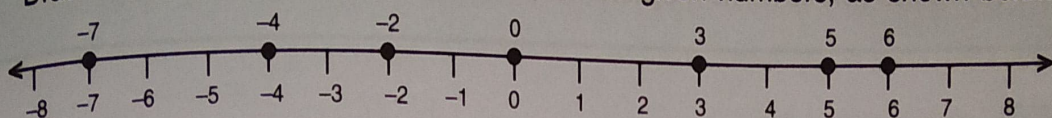
- Also, (i) Every positive number is greater than every negative number.  
(ii) Zero is smaller than every positive number but greater than every negative number.  
(iii) The greater the number, the smaller is its opposite.  
viz. 8 is greater than 5 but  $-8$  is less than  $-5$   
Similarly,  $-9 > -15 \Rightarrow 9 < 15$  and so on  
(iv) The smaller the number, the greater is its opposite.  
viz. 6 is smaller than 7 but  $-6$  is greater than  $-7$   
Similarly,  $-8 < -5 \Rightarrow 8 > 5$  and so on.

### Example 1 :

Using a number line, write the following numbers (integers) in ascending order of value : 3,  $-2$ , 5, 0,  $-7$ , 6 and  $-4$ .

### Solution :

Draw a suitable number line and mark on it the given numbers, as shown below:



Since **ascending** order means **smaller to greater**.

$\therefore$  The given **numbers in ascending order**

$$= -7, -4, -2, 0, 3, 5 \text{ and } 6$$

(Ans.)

Symbol ' $<$ ' means 'is less than' and symbol ' $>$ ' means 'is greater than.'

$\therefore$  Answer to Example 1, given above, can also be written as :

$$-7 < -4 < -2 < 0 < 3 < 5 < 6.$$

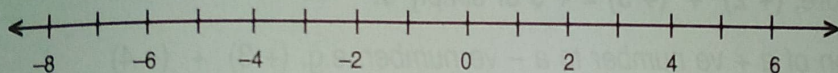
If required, the same numbers in descending (decreasing) order will be written as :

$$6, 5, 3, 0, -2, -4 \text{ and } -7$$

$$\text{or, } 6 > 5 > 3 > 0 > -2 > -4 > -7$$

## EXERCISE 7(A)

1. Fill in the blanks, using the following number line:



- (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 to the *right* of  $-4$ .
  - (iv)  $-3$  is *smaller* than 2 and 3 is *greater* than  $-2$ .
  - (v)  $-4$  is *greater* than  $-8$  and 4 is *smaller* than 8.
  - (vi) 5 is *greater* than 2 and  $-5$  is *smaller* than  $-2$ .
  - (vii)  $-6$  is *smaller* than 3 and the opposite of  $-6$  is *greater* than opposite of 3.
  - (viii) 8 is *greater* than  $-5$  and  $-8$  is *smaller* than 5.
2. In each of the following pairs, state **which integer is greater** :
- (i)  $-15, -23$       (ii)  $-12, 15$       (iii)  $0, 8$       (iv)  $0, -3$
3. In each of the following pairs, state **which integer is smaller** :
- (i)  $0, -6$       (ii)  $2, -3$       (iii)  $15, -51$       (iv)  $13, 0$

4.12 - 18 = 0

Ex-7.1

2.(i)  $-15, -23$   
 $-15 > -23$

(ii)  $-12, 15$   
 $-12 < 15$

(iii)  $0, 8$   
 $0 < 8$

(iv)  $0, -3$   
 $0 > -3$

3.(i)  $0, -6$   
 ~~$-6 < 0$~~

(ii)  $2, -3$   
 $-3 < 2$

(iii)  $15, -51$   
 $-51 < 15$

(iv)  $13, 0$   
 $0 < 13$

Ex - 7.1

$$4. (i) 3^* 0$$

$$3 > 0$$

$$(ii) 0^* -8$$

$$0 > -8$$

$$(iii) -9^* -3$$

$$-9 < -3$$

$$(iv) -3^* 3$$

$$-3 < 3$$

$$(v) 5^* ~~5~~ -1$$

$$5 > -1$$

$$(vi) -13^* 0$$

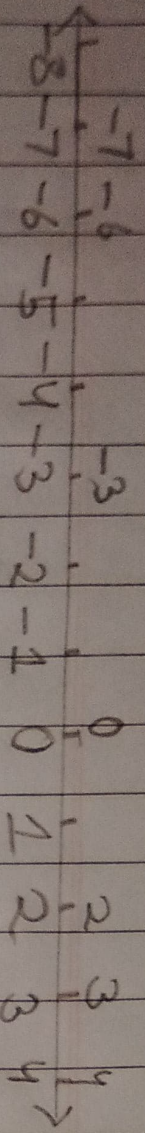
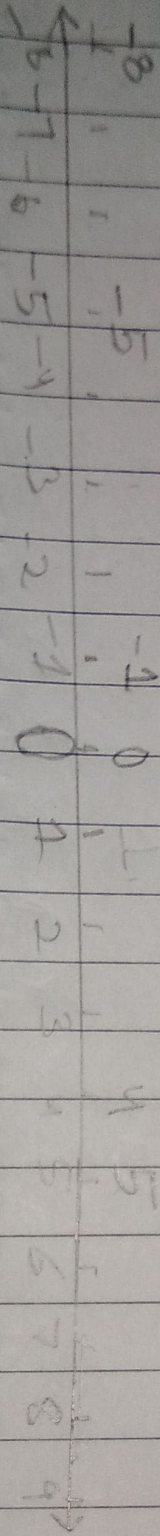
$$-13 < 0$$

$$(vii) -8^* -18$$

$$-8 > -18$$

5. (i)  $-8, 0, -5, 5, 4, -1$

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

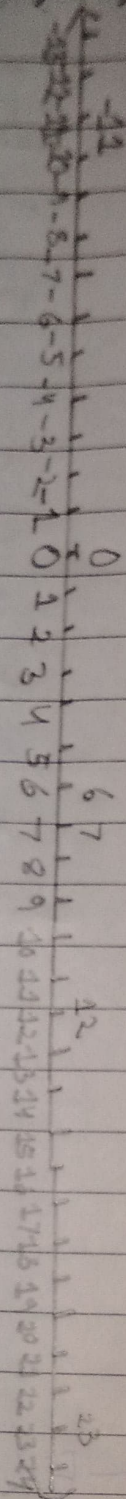
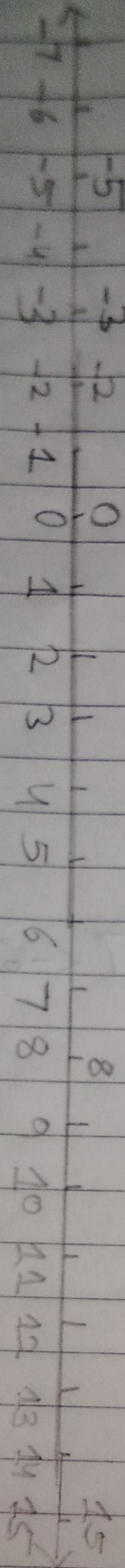


$-7 < -6 < -3 < 0 < 2 < 3 < 4$

$-8 < -5 < -1 < 0 < 4 < 5$

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

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



$23 > 12 > 7 > 6 > 0 > -11$

$15 > 8 > 0 > -2 > -3 > -5$

- 7. (i) The smallest integer is 0. False
- (ii) The opposite of -17 is 17. True
- (iii) The opposite of zero is zero. True
- (iv) Every negative integer is smaller than 0. True
- (v) 0 is greater than every positive integer. False
- (vi) Since zero is neither negative nor positive, it is not an integer. False