

Chapter 3: Integers

NCERT Exemplar · Class 6 · Maths

Questions

Question 1

Every integer less than 0 has the sign

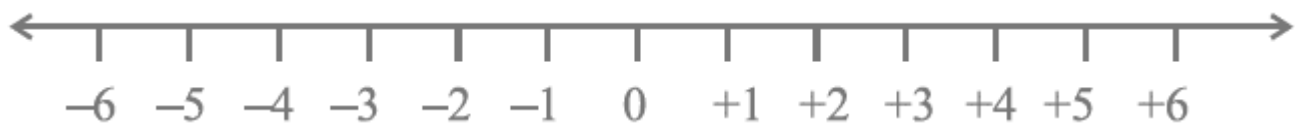
(A) + (B) – (C) $\times$ (D) $\div$

Solution

Solution:-

(B) –

The numbers $-1, -2, -3, -4, \dots$ are referred to as negative integers.



All negative integers are less than zero.

Question 2

The integer '5 units to the right of 0 on the number line' is

(A) +5 (B) -5 (C) +4 (D) -4

Solution

Solution:-

(A) +5



Question 3

The predecessor of the integer -1 is

(A) 0 (B) 2 (C) -2 (D) 1

Solution

Solution:-

(C) -2

The number which comes immediately before a particular number is called its predecessor.

To find the predecessor of a number, subtract one from the given number.

So, predecessor of $-1 = -1 - 1 = -2$

Question 4

Number of integers lying between -1 and 1 is

(A) 1 (B) 2 (C) 3 (D) 0

Solution

Solution:-

(A) 1

Integer that comes between -1 and 1 is 0.

Question 5

Number of whole numbers lying between -5 and 5 is

(A) 10 (B) 3 (C) 4 (D) 5

Solution

Solution:-

(D) 5

We know that, whole numbers start from 0.

Then, the number of whole numbers between -5 and 5 are 0, 1, 2, 3, and 4.

Question 6

The greatest integer lying between -10 and -15 is

(A) -10 (B) -11 (C) -15 (D) -14

Solution

Solution:-

(B) -11

In case of negative integer, small number is greater.

Question 7

The least integer lying between -10 and -15 is

(A) -10 (B) -11 (C) -15 (D) -14

Solution

Solution:-

(D) -14

In case of negative integer, big number is smaller.

Question 8

On the number line, the integer 5 is located

(A) to the left of 0 (B) to the right of 0

(C) to the left of 1 (D) to the left of -2

Solution

Solution:-

(B) to the right of 0

**Question 9**

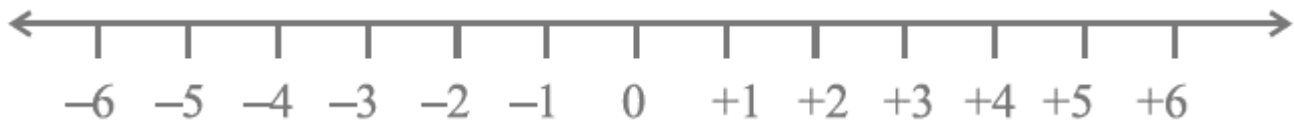
In which of the following pairs of integers, the first integer is not on the left of the other integer on the number line?

- (A) $(-1, 10)$ (B) $(-3, -5)$ (C) $(-5, -3)$ (D) $(-6, 0)$

Solution

Solution:-

- (B) $(-3, -5)$

**Question 10**

The integer with a negative sign $(-)$ is always less than

- (A) 0 (B) -3 (C) -1 (D) -2

Solution

Solution:-

- (A) 0

Negative integers are always come left to the 0, so negative integers always less than 0.

Question 11

An integer with a positive sign $(+)$ is always greater than

- (A) 0 (B) 1 (C) 2 (D) 3

Solution

Solution:-

(A) 0

Positive integers are always coming right to the 0, so positive integers are always greater than 0.

Question 12

The successor of the predecessor of -50 is

(A) -48 (B) -49 (C) -50 (D) -51

Solution

Solution:-

(c) -50

The successor of a whole number is the number obtained by adding 1 to it.

To find the predecessor of a number, subtract one from the given number.

So, predecessor of $-50 = -50 - 1 = -51$

Then, successor of $-51 = -51 + 1 = -50$

Question 13

The additive inverse of a negative integer

(A) is always negative (B) is always positive

(C) is the same integer (D) zero

Solution

Solution:-

(B) is always positive

Question 14

Amulya and Amar visited two places, A and B, respectively, in Kashmir and recorded the minimum temperatures on a particular day as -4°C at A and -1°C at B. Which of the following statement is true?

A.

A is cooler than B

B.

B is cooler than A

C.

There is a difference of 2°C in the temperature

D.

The temperature at A is 4°C higher than that at B.

Solution

Solution:-

(A) A is cooler than B

We know that, in the case of a negative integer, the big number is smaller.

Question 15

When a negative integer is subtracted from another negative integer, the sign of the result

(A) is always negative, (B) is always positive

(C) is never negative, (D) depends on the numerical value of the integers

Solution

Solution:-

(D) depends on the numerical value of the integers

For example, (i) $-4 - (-3) = -4 + 3$

$= -1$

(ii) $-6 - (-9) = -6 + 9$

$= 3$

Question 16

The statement “When an integer is added to itself, the sum is greater than the integer” is

- (A) always true
- (B) never true
- (C) true only when the integer is positive
- (D) true for non-negative integers

Solution

Solution:-

(C) true only when the integer is positive

For example, consider the positive integer $5 = 5 + 5 = 10$

In a positive integer, the sum is greater than the integer.

But in negative integer $-4 = -4 + (-4)$

$$= -4 - 4$$

$$= -8$$

In a negative integer, the sum is less than the integer.

Question 17

Which of the following shows the maximum rise in temperature?

- (A) 0°C to 10°C (B) -4°C to 8°C
- (C) -15°C to -8°C (D) -7°C to 0°C

Solution

Solution:-

(B) -4°C to 8°C

In above temperature, has more rise in temperature.

the difference between two temperatures $= 8 - (-4)$

$$= 8 + 4$$

$$= 12^{\circ}\text{C}$$

In questions 18 to 39, state whether the given statements are true (T) or false (F) :

Question 18

The smallest natural number is zero.

Solution

Solution:-

False.

We know that, natural numbers start from 1, so the smallest natural number is 1.

Question 19

Zero is not an integer, as it is neither positive nor negative.

Solution

Solution:-

False.

Zero is an integer, even though it is neither positive nor negative.

Question 20

The sum of all the integers between -5 and -1 is -6.

Solution

Solution:-

False.

The sum of all integers between -5 and -1 = $-4 -3 -2$

$$= -9$$

Question 21

The successor of the integer 1 is 0.

Solution

Solution:-

False.

The successor of a whole number is the number obtained by adding 1 to it.

Successor of 1 = $1 + 1$

= 2

Question 22

Every positive integer is larger than every negative integer.

Solution

Solution:-

True.

Every positive integer is always larger than every negative integer.

Positive integers are always coming right to 0, so positive integers are always greater than 0.

Question 23

The sum of any two negative integers is always greater than both integers.

Solution

Solution:-

False.

In negative integer = $-4 + (-6)$

= $-4 - 6$

= -10

In a negative integer, the sum is less than both integers.

Question 24

The sum of any two negative integers is always smaller than both integers.

Solution

Solution:-

True.

In negative integer = $-6 + (-7)$

$$= -6 - 7$$

$$= -13$$

In a negative integer, the sum is less than both integers.

Question 25

The sum of any two positive integers is greater than both integers.

Solution

Solution:-

True.

Example: consider the two positive integers 11 and 21

Sum of two integers = $11 + 21$

$$= 32$$

Therefore, the sum of any two positive integers is greater than both integers.

Question 26

All whole numbers are integers.

Solution

Solution:-

True.

Whole numbers start from 0, 1, 2, 3.... so it contains 0 and positive integers.

Hence, all whole numbers are integers.

Question 27

All integers are whole numbers.

Solution

Solution:-

False.

Whole numbers start from 0, 1, 2, 3....

Whole numbers are not containing negative integers, but integers contain both positive and negative numbers.

Therefore, all integers are not whole numbers.

Question 28

Since $5 > 3$, therefore $-5 > -3$

Solution

Solution:-

False.

In the case of a negative integer, the big number is smaller.

So, $-5 < -3$

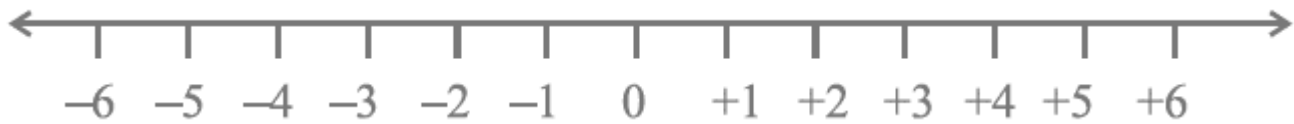
Question 29

Zero is less than every positive integer.

Solution

Solution:-

True.



Zero is always less than a positive integer and greater than a negative integer.

Question 30

Zero is larger than every negative integer.

Solution

Solution:-

True.

Zero is always less than a positive integer and greater than a negative integer.

Question 31

Zero is neither positive nor negative.

Solution

Solution:-

True.

Zero is neither positive nor negative.

Question 32

On the number line, an integer on the right of a given integer is always larger than the integer.

Solution

Solution:-

True.

By observing the number line below, we can say that an integer on the right of a given integer is always larger than the integer.

**Question 33**

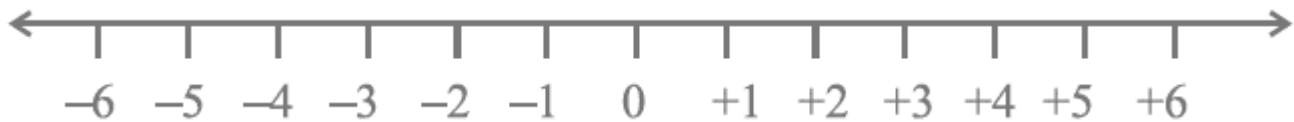
-2 is to the left of -5 on the number line.

Solution

Solution:-

False.

-2 is to the right of the number line.

**Question 34**

The smallest integer is 0.

Solution

Solution:-

False.

As we know, 0 is greater than negative integers.

So, 0 is not the smallest integer.

Question 35

6 and -6 are at the same distance from 0 on the number line.

Solution

Solution:-

True.



From the above number line, we can say that, 6 and -6 are at the same distance of 6 units from 0 on the number line.

Question 36

The difference between an integer and its additive inverse is always even.

Solution

Solution:-

True.

Example:

Consider an integer 5.

Its additive inverse is -5

Difference between an integer and its additive inverse = $5 - (-5)$

$$= 5 + 5$$

$$= 10$$

Question 37

The sum of an integer and its additive inverse is always zero.

Solution

Solution:-

True.

Example:

Consider an integer 8.

Its additive inverse is -8

Sum of an integer and its additive inverse = $8 + (-8)$

$$= 8 - 8$$

$$= 0$$

Question 38

The sum of two negative integers is a positive integer.

Solution

Solution:-

False.

The sum of two negative integers is always negative.

Example:

Consider two negative integers -8 and -10 .

Sum of two negative integers = $-8 + (-10)$

$$= -8 - 10$$

$$= -18$$

Question 39

The sum of three different integers can never be zero.

Solution

Solution:-

False.

Example:

Consider 3 different integers 5 , 10 and -15 .

Sum of 3 integers = $5 + 10 + (-15)$

$$= 5 + 10 - 15$$

$$= 15 - 15$$

$$= 0$$

Therefore, the sum of three different integers can be zero.

In questions 40 to 49, fill in the blanks to make the statements true:

Question 40

On the number line, -15 is to the _____ of zero.

Solution

Solution:-

On the number line, -15 is to the left of zero.

Negative integers are always come left to 0, so negative integers always less than 0.

Question 41

On the number line, 10 is to the _____ of zero.

Solution

Solution:-

On the number line, 10 is to the right of zero.

Positive integers are always coming right to 0, so positive integers are always greater than 0.
