

# Integers

I. Solve the following questions and choose the correct answer from the given alternatives

1. 5 added to -5 gives:

- (a) 10
- (b) -10
- (c) 0
- (d) -25

2. Which of the following statements is true?

- (a) 2 subtracted from -3 gives 1
- (b) -1 subtracted from -5 gives 6
- (c) 3 subtracted from -8 gives -11
- (d) 1 subtracted from -7 gives -6

3. Absolute value of -11 is:

- (a) 10
- (b) -1
- (c) 11
- (d) -11

4. Which of the following numbers is to the right of -3 on number line?

- (a) -4
- (b) 0
- (c) -5
- (d) -6

5. Sum of two negative integers is always:

- (a) Positive

(b) Negative

(c) 0

(d) 1

**6. Which of the following numbers is greater than -1?**

(a) -2

(b) -10

(c) 0

(d) -3

**7. Which number is 5 more than -3?**

(a) -2

(b) 2

(c) 8

(d) -8

**8. The integer succeeding -9 is:**

(a) -10

(b) 10

(c) -8

(d) 8

**9. What will be the opposite of 3 km south?**

(a) 3 km east

(b) 3 km north

(c) 3 km north east

(d) 3 km west

**10. 7 added to -1 gives:**

(a) 6

(b) -6

(c) -8

(d) 8

**11. Sum of -10, -5 and 12 is:**

(a) 27

(b) -3

(c) 3

(d) -27

**12. Which of the followings is in increasing order?**

(a) 0, 1, -1

(b) -1, -2, -3

(c) -1, 0, 1

(d) -1, 1, -2

**13. Sum of -36 and 29 is:**

(a) -65

(b) 65

(c) -7

(d) 7

**14. What will be the additive inverse of -1?**

(a) -2

(b) -1

(c) 0

(d) 1

**15. The pair of integers whose sum is -5:**

(a) 1, -4

(b) -1, 6

(c) -3, -2

(d) 5, 0

**16. The value of  $6 - (-3)$  is:**

(a) 3

(b) -9

(c) -3

(d) 9

**17. Multiplication of -2, -7 and -10 gives:**

(a) -34

(b) 19

(c) -140

(d) 90

**18. Identify the property used in the following:**

$$2 \times 13 + 8 \times 13 = (2 + 8) \times 13$$

(a) Commutative

(b) Closure

(c) Associative

(d) Distributive

**19. Which number is multiplicative identity for the whole numbers?**

(a) 0

(b) 1

(c) 2

(d) 3

**20.  $125 \div (-25)$  is equal to:**

(a) 1

(b) 5

(c) -5

(d) 100

## ANSWERS

1. (c) 0	11. (b) -3
2. (c) 3 subtracted from -8 gives -11	12. (c) -1, 0, 1
3. (c) 11	13. (c) -7
4. (b) 0	14. (d) 1
5. (b) Negative	15. (c) -3, -2
6. (c) 0	16. (d) 9
7. (b) 2	17. (c) -140
8. (c) -8	18. (d) Distributive
9. (b) 3 km north	19. (b) 1
10. (a) 6	20. (c) -5

## II. Answer the following questions

### 1. Fill in the blanks.

i)  $(-1) \times \text{even number of times} = \underline{\hspace{2cm}}$

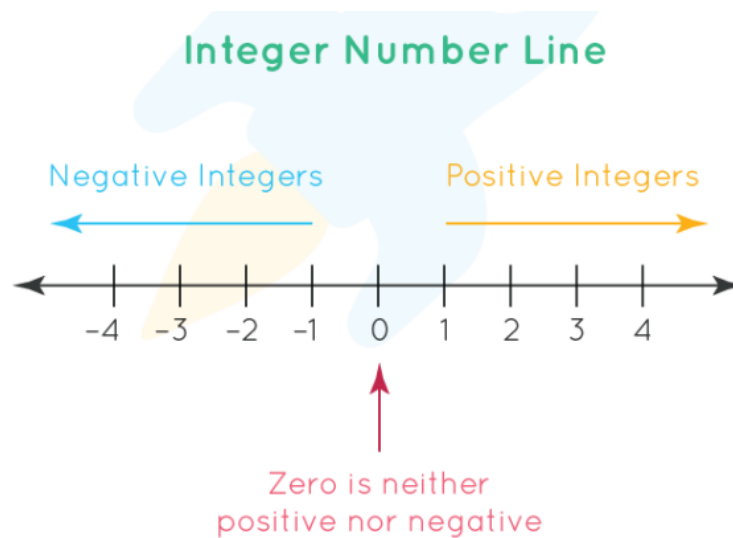
ii)  $(-1) \times \text{odd number of times} = \underline{\hspace{2cm}}$

iii)  $(-3589) \div \underline{\hspace{2cm}} = -1$

iv)  $\underline{\hspace{2cm}} \div 993 = 0$

### 2. Use the below given integer number line to find a pair of integers whose:

- i) Sum is -8   ii) Difference is 0   iii) Sum is -2   iv) Difference is 2



### 3. Write a negative integer and a positive integer whose

i) Sum is -3

ii) Difference is 10

4. The fish in the pond below carry some numbers. Choose any 2 pairs and carry out two multiplications with those numbers now. Choose two other pairs and carry out divisions with these numbers.



**5. The weather report suggested that your city's temperature increased from – 10 degree Celsius to 20 degree Celsius. What is the rise in temperature?**



- i) 20 degree Celsius
- ii) 25 degree Celsius
- iii) 30 degree Celsius
- iv) 12 degree Celsius

**6. Find the value of each of the following products.**

- i)  $(-3) \times 15$
- ii)  $4 \times (-10)$
- iii)  $(-3) \times (-2) \times 5$
- iv)  $2 \times (-8) \times (-1)$
- v)  $(-8) \times (-4) \times 0 \times (-6) \times (-8)$

**7. Verify the following:**

- i)  $(-5) \times [(-7) + (-5)] = [(-5) \times (-7)] + [(-5) \times (-5)]$
- ii)  $(-7) \times [(-8) + 9] = [-7 \times (-8)] + [(-7) \times 9]$

**8. Find the value of a if product of a with**

i) 1 is 100

ii) 300 is -1

**9. In a Math test (+2) marks are given for every correct answer and 1 mark is given for every incorrect answer. Zayn gets 12 of her answers correct out of 18 questions on the test. What will be his score?**

i) 15 marks

ii) 18 marks

iii) 12 marks

iv) 10 marks

**10. Use  $>$ ,  $<$  OR  $=$  symbols in the blank space in each of the following.**

i)  $(-3) - (-5)$  \_\_\_\_  $(-4) + (-9)$

ii)  $71 - 2 - 31$  \_\_\_\_  $71 - 2 + 31$

iii)  $39 + (-35) - (58)$  \_\_\_\_  $37 + (-11) - (+26)$

iv)  $23 + (-8) - 7$  \_\_\_\_  $9 - 13 + 12$



## ANSWERS

<p>1.</p> <p>i) 1</p> <p>ii) -1</p> <p>iii) 3589</p> <p>iv) 0</p>	<p>6.</p> <p>i) -15</p> <p>ii) -40</p> <p>iii) 30</p> <p>iv) 16 v) 0</p>
<p>2.</p> <p>i) -1 and -7</p> <p>ii) -2 and +2</p> <p>iii) 2 and -4</p> <p>iv) 0 and -2</p>	<p>7.</p> <p>i) <math>LHS \neq RHS</math></p> <p>ii) <math>LHS = RHS</math></p>
<p>3.</p> <p>i) -5 and 2</p> <p>ii) 5 and -5</p>	<p>8.</p> <p>i) <math>a = 100</math></p> <p>ii) <math>a = \frac{-1}{300}</math></p>
<p>4.</p> <p><math>+9 \times -8 = -56</math></p> <p><math>-8 \times -13 = -21</math> <math>-27 \div +9 = -3</math> <math>-24 \div -8 = 3</math></p>	<p>9. 18 marks</p>
<p>5. 30 degree Celsius</p>	<p>10.</p> <p>i) <math>&gt;</math></p> <p>ii) <math>&lt;</math></p> <p>iii) <math>&lt;</math></p> <p>iv) <math>=</math></p>

### III. Answer the following questions

**1. Write the numbers in the following examples using the proper signs (+/-).**

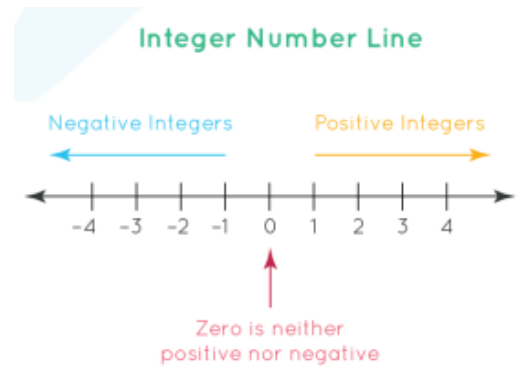
- i) A submarine is at a depth of 512 meters below sea level.
- ii) The height of Mt. Everest, the highest peak in the Himalayas, is 8848 meters.
- iii) A kite is flying at a distance of 120 meters from the ground.
- iv) The tunnel is at a depth of 2 meters under the ground.

**2. Write down a pair of integers whose**

- i) Sum is -1
- ii) Difference is 0
- iii) Sum is -4
- iv) Difference is 3

**3. Use the given integer number line to write a negative integer and a positive integer whose:**

- i) Sum is -6
- ii) Difference is -4
- iii) Product is 10
- iv) Quotient is -1



**4. The box given below contains some integers. Choose any 2 pairs and carry out two multiplications with those numbers. Now, choose two other pairs and carry out divisions with these numbers**

**5. Two churches are situated 8 m above the sea level and 19 m below the sea level respectively. What is the distance between the levels of two churches?**

+9 -8 -13 -27 -8 -24

i) 23 m

ii) 21 m

iii) 27 m

iv) 20 m

**6. Find the value of each of the following products.**

i)  $(0) \times -15$

ii)  $4 \times (-1)$

iii)  $(-3) \times (-2) \times 5$

iv)  $2 \times (-8) \times (-1)$

v)  $(-8) \times (-4) \times 0$

**7. Verify the following:**

i)  $(-1) [ (-1) + (-1) ] = [ (-1) (-1) ] + [ (-1) (-1) ]$

ii)  $(-2) [ (-3) + 5 ] = [-5 (-2)] + [ (-3) 2 ]$

**8. Find the integer  $x$  if product of  $x$  with**

i) 1 is 200

ii) 600 is -1

iii) -3 is 0

iv) 62 is -62

**9. In the Math test you took, (+5) marks are given for every correct answer and 2 marks are deducted for every incorrect answer. You were able to get 15 answers correct out of 18 questions on the test! What will be your score?**

- i) 42 marks
- ii) 48 marks
- iii) 35 marks
- iv) 25 marks

**10. Use  $>$ ,  $<$  OR  $=$  symbols in the blank space in each of the following.**

- i)  $(-3) - (-5)$  \_\_\_\_  $(-4) + (-9)$
- ii)  $7 - 2 - 3$  \_\_\_\_  $7 - 2 + 8$
- iii)  $9 + (-5) - (8)$  \_\_\_\_  $7 + (-1) - (+8)$
- iv)  $2 + (-8) - 7$  \_\_\_\_  $9 - 3 + 2$

**11. A bird descends at the rate of 10 ft/min. How long will it take for the bird to reach the ground if it is flying at 300 ft high in the sky?**

- i) 20 minutes
- ii) 10 minutes
- iii) 12 minutes
- iv) 30 minutes

**12. The Indus Valley Civilization began in 7000 BC and came to an end in 1900 B.C. How long did it last?**

- i) 2,100 years
- ii) 1,500 years
- iii) 5,100 years

iv) 4,200 years

**13. Metal Gallium is a liquid at room temperature. Its melting point is  $29.76^{\circ}\text{C}$ . The freezing point of water is  $0^{\circ}\text{C}$ . How much warmer is the melting point of Gallium than the freezing point of water?**

i)  $29.76^{\circ}\text{C}$

ii)  $32.45^{\circ}\text{C}$

iii)  $12.20^{\circ}\text{C}$

iv)  $11.02^{\circ}\text{C}$

**14. City X is located at 290 feet above the sea level. Another city Y is 102 feet below the sea level. What is the level difference between these two cities?**

i) 392 feet

ii) 123 feet

iii) 220 feet

iv) 150 feet

**15. Four friends went for a trip. They had spent \$1900 for the trip. The friends agreed to equally share the expenses. What integer will represent how much each person will have to pay?**

i) \$ 450

ii) \$ 230

iii) \$ 120

iv) \$ 100

## ANSWERS

1. i) -512 ii) +8848 iii) +120 iv) -2	6. i) 0 ii) -4 iii) 30 iv) 16 v) 0	11. 30 minutes
2. i) 1 and -2 ii) 2 and -2 iii) 8 and -12 iv) -5 and -8	7. i) LHS = RHS ii) LHS $\neq$ RHS	12. 5,100 years
3. i) -10 and 4 ii) -2 and 2 iii) -5 and 2 iv) -3 and 3	8. i) $x = 100$ ii) $x = \frac{-1}{600}$ iii) 0 iv) -1	13. 29.76 degree Celsius
4. $+9 \times -8 = -56$ $-8 \times -13 = -21$ $-27 \div +9 = -3$ $-24 \div -8 = 3$	9. 48 marks	14. 392 feet
5. 27 m	10. i) $>$ ii) $<$ iii) $<$ iv) $=$	15. \$ 450

#### IV. Answer the following questions

**1. Find the predecessor of the following integers:**

- A) -9
- B) 0
- C) -87
- D) -91

**2. Which number in the following pairs is larger?**

- A) 0, -12
- B) -72, -9
- C) 12, -11
- D) -98, -78

**3. Nathan ended round one of a quiz with 200 points. In round two, he scored -300 points and in the third round, he gained 200 points. What was his total score at the end of the third round?**



- A) 200 points
- B) 50 points
- C) 100 points

D) 75 points

**4. Is zero an integer? Is it positive or negative?**

**5. What will be the sum of the following series if the number of terms is 150?**

$$5 + (-5) + 5 + (-5) + 5 + \dots$$

A) 1

B) 2

C) 3

D) 0

**6. The product of two negative integers is always a \_\_\_\_\_ integer.**

**7. Evaluate:**

A)  $(+8) - (0) + (-3) + (-17)$

B)  $(+9) + (-49) - (+30) - (-86)$

**8. A submarine submerges from the surface of the sea at the rate of 10 m/min. How long will it take to reach 300 m below the sea level?**

A) 15 minutes

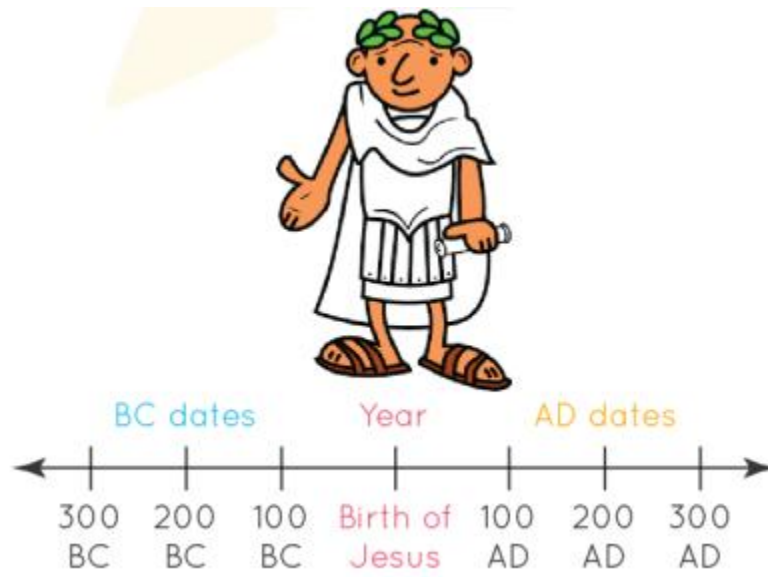
B) 5 minutes

C) 30 minutes

D) 2 minutes



9. Roman civilization began in 509 B.C. and came to an end in 476 A.D. How long did Roman civilization last?



- A) 854 years
- B) 720 years
- C) 500 years
- D) 985 years

10. Metal mercury is a liquid at room temperature. Its melting point\* is  $-39^{\circ}\text{C}$ . The freezing point\* of alcohol is  $-114^{\circ}\text{C}$ . How much warmer is the melting point of mercury than the freezing point of alcohol?



\*The melting point of mercury is the temperature at which solid mercury converts into a liquid state.

**\*The freezing point of alcohol is the temperature at which liquid alcohol converts into a solid state.**

- A) 45 degree Celsius
- B) 25 degree Celsius
- C) 75 degree Celsius
- D) 10 degree Celsius

## **ANSWERS**

1. A) -10 B) -1 C) -88 D) -92	6. The product of two negative integers is always a positive integer.
2. A) 0 B) -9 C) 12 D) -78	7. A) -12 B) 16
3. 100 points	8. 30 minutes
4. Yes, zero is an integer. Zero is neither negative nor positive integer.	9. 985 years
5. 0	10. 75 degree Celsius

**V. Answer the following questions**

**1. The value of  $(-9) \times (-4)$  is \_\_\_\_\_.**

A) 32

B) 27

C) 12

D) 36

**2. Find the value of  $-3 + 8$ .**

A) 2

B) 1

C) 5

D) 5

**3. The sum of any four negative integers is always \_\_\_\_\_.**

A) positive

B) negative

C) Can't say

D) None of these

**4. Find the value of the following :**

A)  $4 \times (-2) \times (-4) \times (-1) \times 2 =$

B)  $5 \times (-2) \times (-2) \times 4 =$

**5. What will be the sum of the following series if the number of terms is 801?**

**$1 + (-1) + 1 + (-1) + 1 + \dots$**

A) -2

B) -1

C) -4

D) -7

**6. Find the value of the following expression:**

A)  $112 - (-109) - (90)$

B)  $(-54) - 120 - (+34)$

**7. Find the sum of the following integers:**

A) 168 and -838

B) 219 and 925

**8. The temperature in city-X was  $10^{\circ}\text{C}$  in the morning which dropped to  $5^{\circ}\text{C}$  in the evening. What is the temperature difference?**

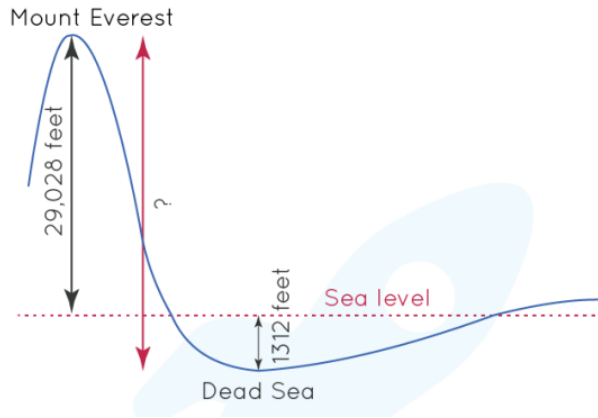
A)  $2^{\circ}\text{C}$

B)  $1^{\circ}\text{C}$

C)  $5^{\circ}\text{C}$

D)  $3^{\circ}\text{C}$

**9. Mt. Everest, the highest peak in Asia, is 29,028 feet above sea level. The Dead Sea is 1,312 feet below sea level. What is the level difference between these two places?**



- A) 29,340 feet
- B) 30,340 feet
- C) 20,340 feet
- D) 19,340 feet

**10. Four college mates had rented an apartment together. On moving out, they were charged \$1800 for damages to the furniture and walls. The roommates agreed to equally split the cost. What integer will represent how much each person will have to pay?**

- A) \$150
- B) \$350
- C) \$250
- D) \$450

## Answers

1. 36	6. A) -87 B) -208
2. 5	7. A) -670 B) -706
3. negative	8. 5°C
4. A) -64 B) 80	9. 30,340 feet
5. -1	10. \$450