

Important Questions for Class 7

Maths

Chapter 1 Integers

Very Short Answer Questions

1 Mark

1. Define Integers.

Ans: The numbers range from negative infinity to positive infinity including zero. They are denoted by I i.e. $I = \{\dots, -3, -2, -1, 0, 1, 2, 3, \dots\}$.

2. We move to the left in the number line when we _____ or _____.

Ans: We move to the left in the number line when we add a negative integer or subtract a positive integer.

3. Additive inverse of -25 is ____.

Ans: 25.

4. Fill the blanks for $-228+96+125$ ____ $-451+197+76$ (use $>, <, =$)

Ans: $>$

5. What would come in place of ? in $-11+0=?$

Ans: -11

6. Fill the blanks for $-22 \times -13 \times 5 =$ ____

Ans: 1430

7. Fill the blanks for $-3 \times 125 =$ ____

Ans: -375

Short Answer Questions

2 Marks

8. Verify $a - (-b) = a + b$ for the following values of a and b

a. $a=25, b=12$

Ans: Substituting value of a and b in given equation

$$a - (-b) = a + b$$

$$25 - (-12) = 25 + 12$$

$$25 + 12 = 25 + 12$$

$$37=37$$

Hence, verified.

b. $a=113, b=16$

Ans: Substituting value of a and b in given equation

$$a - (-b) = a + b$$

$$113 - (-16) = 113 + 16$$

$$113 + 16 = 113 + 16$$

$$129 = 129$$

9. Use $>$, $<$ or $=$ sign for the below statements to make it true

a. $(-9) + (-28)$ _____ $(-9) - (-28)$

Ans: Solving both sides-

$$(-9) + (-28) = -37$$

$$(-9) - (-28) = 19$$

Thus, $(-9) + (-28) < (-9) - (-28)$

b. $25 + (-14) - 18$ _____ $25 + (-14) - (-18)$

Ans: Solving both sides-

$$25 + (-14) - 18 = 11 - 18$$

$$= -7$$

$$25 + (-14) - (-18) = 11 + 18$$

$$= 29$$

Thus, $25 + (-14) - 18 < 25 + (-14) - (-18)$.

10. Write down a pair of integers for the following

a. Sum gives -9

Ans: A pair of integers that gives sum -9 is $(-6, -3)$.

b. Difference gives -11

Ans: A pair of integers that gives sum -11 is $(-14, 3)$.

11.

a. Write a positive and negative integer whose sum is -4.

Ans: $(4, -8)$ is a positive and negative integer whose sum is -4.

b. Write a negative integer and a positive integer whose difference is -2 .

Ans: $(-1, 1)$ is a positive and negative integer whose sum is -2 .

12. Fill in the blanks

a. $(-4) + (-11) = (-11) + \underline{\hspace{2cm}}$

Ans: $(-4) + (-11) = (-11) + \underline{\hspace{2cm}}$

$$\Rightarrow (-4) + (-11) + 11$$

$$\Rightarrow -4$$

Thus, $(-4) + (-11) = (-11) + -4$

b. $[22 + (-9)] + (-2) = 22 + [\underline{\hspace{2cm}} + (-2)]$

Ans: $[22 + (-9)] + (-2) = 22 + [\underline{\hspace{2cm}} + (-2)]$

$$\Rightarrow 13 - 2 = 22 + [\underline{\hspace{2cm}} + (-2)]$$

$$\Rightarrow 11 - 22 = [\underline{\hspace{2cm}} + (-2)]$$

$$\Rightarrow -11 = \underline{\hspace{2cm}} + (-2)$$

$$\Rightarrow -11 + 2$$

$$\Rightarrow -9$$

Thus, $[22 + (-9)] + (-2) = 22 + [-9 + (-2)]$

13. Verify $7 \times [(22) + (-9)] = [(7) \times 22] + [7 \times -9]$

Ans: On solving both sides

$$7 \times [(22) + (-9)] = [(7) \times 22] + [7 \times -9]$$

$$7 \times [13] = 154 - 63$$

$$91 = 91$$

Hence, verified.

14. Find the product of

a. $63 \times 0 \times -7$

Ans: The product of $63 \times 0 \times -7$ is 0 .

b. $5 \times (-3) \times -2$

Ans: So, $5 \times (-3) \times -2 = 5 \times 6$

$$= 30$$

The product of $5 \times (-3) \times -2$ is 30 .

15.

a. $-2 \times \underline{\quad} = 14$

Ans: So, $-2 \times \underline{\quad} = 14$

$$\Rightarrow \frac{14}{-2}$$

$$\Rightarrow -7$$

Hence, $-2 \times 7 = 14$.

b. $\underline{\quad} \times -8 = -32$

Ans: So, $\underline{\quad} \times -8 = -32$

$$\Rightarrow \frac{-32}{-8}$$

$$\Rightarrow 4$$

Hence, $4 \times -8 = -32$

16. Evaluate

a. $-39 \div 13$

Ans: $-39 \div 13$

$$\Rightarrow \frac{-39}{13}$$

$$\Rightarrow -3$$

Hence, $-39 \div 13 = -3$

b. $-64 \div [-8 \times -8]$

Ans: $-64 \div [-8 \times -8]$

$$\Rightarrow \frac{-64}{[-8 \times -8]}$$

$$\Rightarrow \frac{-64}{64}$$

$$\Rightarrow -1$$

Hence, $-64 \div [-8 \times -8] = -1$

17. Write two pairs of integers such that $a \div b = -5$

Ans: The two pairs of integers such that $a \div b = -5$ are –

- $(10, -2)$
- $(-70, 14)$

Short Answer Questions

3 Marks

18. Manvita deposits Rs. 5000 in her bank account after two days. She withdraws Rs. 3748 from it. If the amount deposited is a positive integer. How will you represent the amount withdrawn and also find the balance amount in the account?

Ans: The amount withdrawn should always be represented as a negative integer. Thus, it would be -3748 .

Since, Total balance = Amount deposited – Amount withdrawn

Therefore,

$$\text{Total balance} = 5000 - 3748$$

$$= \text{Rs. } 1252.$$

Hence, the amount withdrawn would be negative integer i.e., -3748 and the balance amount in the account is Rs. 1252.

19. In a game Mishala scored 20,-40,10 and Meera scored -40,10,20. Who scored more and can we add scores (integers) in any order?

Ans: Since, Mishala scored 20,-40,10.

Therefore, total score of Mishala is

$$= 20 - 40 + 10$$

$$= -20 + 10$$

$$= -10$$

And since, Meera scored -40,10,20.

Therefore, total score of Meera is

$$= -40 + 10 + 20$$

$$= -20 + 10$$

$$= -10$$

Hence, both scored same points in a game but in a different order.

Yes, we can add integers in any order.

20. Find the product with suitable properties for the following-

a. $16 \times (-34) + (-34) \times (-18)$

Ans: Given

$$16 \times (-34) + (-34) \times (-18)$$

By distributive property-

$$a \times b + a \times c = a[b + c]$$

Thus,

$$= -34[16 - 18]$$

$$= -34 \times -2$$

$$=68$$

$$\text{Hence, } 16 \times (-34) + (-34) \times (-18) = 68.$$

b. $23 \times -36 \times 10$

Ans: Given

$$23 \times -36 \times 10$$

By commutative property-

$$(a \times b) \times c = a \times (b \times c)$$

Thus,

$$= 23 \times [-36 \times 10]$$

$$= 23 \times -360$$

$$= -8280$$

21. A fruit merchant earns a profit of Rs.6 per bag of orange sold and a loss of Rs.4 per bag of grapes sold.

a. Merchant sells 1800 bags of orange and 2500 bags of grapes. What is the profit or loss?

Ans: Since, profit is denoted by a positive integer and a loss is denoted by a positive integer.

Therefore, profit earned by selling 1 bag of orange is Rs. 6

Profit earned by selling 1800 bags of orange is

$$6 \times 1800$$

$$= \text{Rs. } 10,800$$

Loss incurred by selling 1 bag of grapes is Rs. -4

Loss incurred by selling 2500 bags of grapes is

$$= -4 \times 2500$$

$$= 10,000$$

Total profit or loss earned = Profit + Loss

$$= 10,800 + 10,000$$

$$= 800$$

Hence, a profit of Rs.800 will be earned by a merchant.

b. What is the number of bags of oranges to be sold to have neither profit nor loss if the number of grapes bags are sold is 900 bags?

Ans: Since, profit is denoted by a positive integer and a loss is denoted by a positive integer.

Therefore, Loss incurred while selling 1 bag of grapes = -Rs.4

Loss incurred while selling 900 bags of grapes be

$$= -4 \times 900$$

$$= -3600$$

Let the number of bags of oranges to be sold = x

Profit earned when 1 bag of orange is sold = Rs.6

Profit earned while selling x bags of orange = $6x$

Condition for no profit, no loss

Profit earned + Loss incurred = 0

$$6x - 3600 = 0$$

$$6x = 3600$$

$$x = \frac{3600}{6}$$

$$x = 600$$

Hence, to have neither profit nor loss 600 number of bags of oranges to be sold.

22. Verify that $a \div (b+c) \neq (a \div b) + (a \div c)$ for each of the following values of a, b and c .

a. $a=8, b=4, c=2$

Ans: For equation $a \div (b+c) \neq (a \div b) + (a \div c)$.

$$\text{L.H.S} = a \div (b+c)$$

$$= 8 \div (-4+2)$$

$$= 8 \div (-2)$$

$$= -4$$

$$\text{R.H.S} = (a \div b) + (a \div c)$$

$$= (8 \div -4) + (8 \div 2)$$

$$= -2 + 4$$

$$= 2$$

Hence, L.H.S \neq R.H.S .

Thus, $a \div (b+c) \neq (a \div b) + (a \div c)$ for $a=8, b=4, c=2$.

b. $a=-15, b=2, c=1$

Ans: For equation $a \div (b+c) \neq (a \div b) + (a \div c)$.

$$\text{L.H.S} = a \div (b+c)$$

$$= -15 \div (2+1)$$

$$= -15 \div 3$$

$$= -5$$

$$\text{R.H.S} = (a \div b) + (a \div c)$$

$$= (-15 \div 2) + (-15 \div 1)$$

$$= -7.5 + (-15)$$

$$=-22.5$$

Hence, L.H.S \neq R.H.S

Thus, $a \div (b+c) \neq (a \div b) + (a \div c)$ for $a=-15, b=2, c=1$.

23. In a CET Examination (+2) marks are given for every correct answer and (-0.5) marks are given for every wrong answer and 0 for non-attempting any question.

a. Likitha scores 30 marks. If she got 20 correct answers, how many questions she has attempted incorrectly?

Ans: Marks obtained for 1 correct answer $=+2$

Marks obtained for 1 wrong answer $= -0.5$

So, Marks scored by Likitha $= 30$

Marks obtained by 20 correct answers $= 20 \times 2 = 40$

Marks obtained for incorrect answer = Total score – Marks obtained by 20 correct answer

$$= 30 - 40$$

$$= -10$$

Marks obtained for 1 wrong answer $= -0.5$

$$\therefore \text{The number of incorrect answers} = \frac{-10}{-0.5}$$

$$= 20$$

Hence, she attempted 20 questions wrongly.

b. Saara scores -4 marks if she got 3 correct answers. How many were incorrect?

Ans: Marks obtained for 1 correct answer $=+2$

Marks obtained for 1 wrong answer $= -0.5$

So, Marks scored by Saara $= -4$

Marks obtained for 3 correct answers $= 3 \times 2 = 6$

Marks obtained for incorrect answers = Total score – Marks obtained for 3 correct answer

$$= -4 - 6 = -10$$

Marks obtained for 1 wrong answer $= -0.5$

$$\therefore \text{The number of incorrect questions} = \frac{-10}{-0.5}$$

$$= 20$$

Hence, 20 questions were incorrect.