

Solution
CLASS 7 MATHEMATICS WORKSHEET -1 (UPTO JULY 2023)
Class 07 - Mathematics
Section A

1. (a) 4

Explanation: $-16 \div [8 \div (-2)] = -16 \div -4 = 4$

2.

(c) -16

Explanation: If the two integers being divided have different signs, then their quotient is negative.
 $80 \div (-5) = -16$

3.

(d) $a \div b$ **Explanation:** $a \div b$ may give irrational numberEx: $5 \div 4$

4.

(c) $-(-a)$ **Explanation:** Since, $-(-a) = a$, which is not the additive inverse of a .

5.

(c) $a \div 0$ **Explanation:** As anything divided by 0 is not defined.

6. (a) -100

Explanation: $[(-10) \times (+9)] + (-10) = (-90) - 10 = -100$

7.

(b) $(-25) \times 6 \times 4$ **Explanation:** Given, $-25 \times [6 + 4] = -25 \times 10 = -250$ and $-25 \times 6 \times 4 = -600$ Clearly, $-600 \neq -250$

8. (a) 25

Explanation: Division of a negative integer by a negative integer results in a positive integer. $(-325) \div (-13) = 25$

9.

(c) 12^0 C**Explanation:** The required difference = $(-9) - (-21) = -9 + 21 = 12^0$ C

10.

(d) $(-12) \div 5$ **Explanation:** Here, $(-12) \div 5 = -2.4$ which is not an integer.**Section B**

11. 1. -3

12. 1. We have,

$$\frac{\quad}{\quad} \div 1 = -87$$

$$\text{Here, } \underline{x} \div 1 = -87$$

$$x = (-87)(1) = -87$$

13. 1. We have,

$$(-206) \div \frac{\quad}{\quad} = 1$$

$$\text{Here, } (-206) \div \underline{x} = 1$$

$$x = -206 / 1 = -206$$

14. (a) True

Explanation: True

$$(-237) \times 0 = 0$$

$$\text{and } 0 \times (-39) = 0$$

15. (a) True

Explanation: True

16. (a) True

Explanation: True.

Follows by Commutative property of addition.

17. (a) Both A and R are true and R is the correct explanation of A.

Explanation: Every integer is a rational number but every rational number need not be an integer. An integer is a number with no decimal or fractional part and it includes negative and positive numbers, including zero. A few examples of integers are -8, -5, 0, 1, 3, 8, 78, and 221.

Both (A) and (R) is a true statement and (R) is correct explanation of (A).

18. (a) Both A and R are true and R is the correct explanation of A.

Explanation: According to the multiplicative identity property of 1, any number multiplied by 1, gives the same result as the number itself. So, $15 \times 1 = 15$

So, (A) and (R) is a true statement, and (R) is the correct reason for (A).

19. (a) Both A and R are true and R is the correct explanation of A.

Explanation: Negative multiplied by Negative is a positive number, which means that the product of two negative integers is always positive.

$$-11 \times (-6) = 66$$

So, (A) and (R) is a true statement, and (R) is the correct reason for (A).

20.

(d) A is false but R is true.

Explanation: $a \times (b + c) = a \times b + a \times c$ is distributive property. So, (A) is a false statement.

The distributive Property States that when a factor is multiplied by the sum/addition of two terms, it is essential to multiply each of the two numbers by the factor, and finally perform the addition operation. So, (R) is a true statement.

Section C

21. $(-17) \times (-29) = 17 \times 29 \dots [(-a) \times (-b) = a \times b]$
 $= 17 \times (30 - 1) = 17 \times 30 - 17 \times 1 \dots$ [distributivity of multiplication over subtraction]
 $= 510 - 17 = 493$

22. According to question,

Marks given for one correct answer = 5

So, marks given for 10 correct answers = $5 \times 10 = 50$

Radhika's score = 30

Marks obtained for incorrect answers = $30 - 50 = -20$

Marks given for one incorrect answer = (-2)

Therefore, number of incorrect answers = $(-20) \div (-2) = 10$

23. Let the number to be multiplied be x

According to Question

$$(-3)x = 36$$

$$x = 36 \div (-3)$$

$$x = \frac{36}{-3}$$

$$x = -12$$

24. Here,

$$-7 < -6,$$

$$\text{and, } -8 < -6$$

$$\text{where, } -7 - (-8) = -7 + 8 = 1 > -6$$

25. Here,

$$-5 > -10, \text{ and } -6 > -10, \text{ where } -5 + (-6) = -11 < -10$$

26. Let x be the number to be multiplied

$$(-5)x = -40$$

$$x = -40 \div (-5)$$

$$x = -40/(-5)$$

$$x = 8$$

27. Commutative property of multiplication is $a \times b = b \times a$

L.H.S

$$2 \times (-8) = -16$$

R.H.S

$$-8 \times 2 = -16$$

Therefore, L.H.S = R.H.S

Hence, verified.

28. $a \div (b + c) = 12 \div [(-4) + 2] = 12 \div (-2) = -6$

$$(a \div b) + (a \div c) = 12 \div (-4) + (12 \div 2) = -3 + 6 = 3$$

So, $a \div (b + c) \neq (a \div b) + (a \div c)$

29. L.H.S. = $(-21) \times [(-4) + (-6)] = [(-21) \times (-10)]$

$$= 21 \times 10 = 210$$

$$\text{R.H.S.} = [(-21) \times (-4)] + [(-21) \times (-6)]$$

$$= (21 \times 4) + (21 \times 6) = 84 + 126 = 210$$

$$\text{So, } (-21) \times [(-4) + (-6)] = [(-21) \times (-4)] + [(-21) \times (-6)]$$

30. $[(-36) \div 12] \div 3$

$$= [-3] \div 3$$

$$= [-1]$$

Section D

31. Given that,

Marks given for every correct answer = +3

And, Marks given for every wrong answer = - 2

Also, it is given that:

Marks obtained by Mohini = - 5

Correct answer = 7

Hence,

Marks obtained for correct answers = $7 \times 3 = 21$

Therefore,

Marks obtained for incorrect answers = Total marks – Marks obtained for correct answers

$$= -5 - 21$$

$$= - 26$$

As, marks obtained for 1 wrong answer = - 2

Hence,

$$\text{Number of incorrect answers} = \frac{-26}{-2}$$

$$= 13$$

32. Given that,

Marks given for every correct answer = +3

And, Marks given for every wrong answer = -2

Also, it is given that:

Marks obtained by Radhika = 20

Correct answer = 12

Hence,

Marks obtained for correct answers = $12 \times 3 = 36$

Therefore,

Marks obtained for incorrect answers = Total marks – Marks obtained for correct answers

$$= 20 - 36 = - 16$$

As, marks obtained for 1 wrong answer = - 2

$$\text{Hence, Number of incorrect answers} = \frac{-16}{-2} = 8$$

33. $8 \times 53 \times (-125)$

$$= (8 \times 53) \times (-125)$$

$$= 424 \times (-125) = -(424 \times 125) \dots [a \times (-b) = -(a \times b)]$$

$$= -[424 \times (100 + 25)] = -[424 \times 100 + 424 \times 25] \dots [\text{distributivity of multiplication over addition}]$$

$$= -[42400 + 10600] = -53000$$

$$\begin{aligned}
 34. & (-57) \times (-19) + 57 \\
 & = (57) \times (19) + 57 \text{ (Product of two negative signs is a positive sign)} \\
 & = (57) \times (19) + 57 \times 1 \text{ (Any number multiplied by 1 is the number itself)} \\
 & = 57(19+1) \\
 & = 57(20) \\
 & = 1140
 \end{aligned}$$

$$\begin{aligned}
 35. & \{29 + (59 + 19)\} \\
 & = \{29 + (78)\} \\
 & = 107 \\
 & \{(29 + 59) + 19\} \\
 & = \{(88) + 19\} \\
 & = 107
 \end{aligned}$$

Yes they are equal.

It is clear that the addition of rational numbers is associative.

Section E

36. a. Since the elevator is going down, so the distance covered by it will be represented by a negative integer.

Change in position of the elevator in one minute = -9m

Position of the elevator after 60 minutes = $-9 \times 60 = -540m$

i.e. 540m below ground level.

- b. Change in position of the elevator in one minute = -9m

Position of the elevator after 55 minutes = $-9 \times 55 = -495m$

i.e. 495m below ground level.

So, the final position of the elevator = $-495 + 20 = -475m$

i.e. 475m below ground level.

37. a. Duration of era = (330BC and 395AD)

$$= (-330 + 395)$$

$$= +65$$

$$= 65AD$$

- b. Time period Archimedes lived = 287BC and 212BC

$$= (-287) - (-212)$$

$$= (-287 + 212)$$

$$= (-75)$$

$$= 75BC$$

Time period Aristotle lived = 380BC and 322BC

$$= (-380) - (-322)$$

$$= (-380 + 322)$$

$$= (-58)$$

$$= 58BC$$

Therefore, Archimedes lived more.

38. i. Pair of integers whose difference is negative integer may be $-15 - (10) = (-25)$
 ii. Pair of integers whose difference is an integer smaller than both the integers may be $7 - 5 = 2$
 2 is smaller than 7 and 5.
 iii. Pair of integers whose difference is an integer smaller than only one of the integer may be $10 - (2) = (8)$
 8 is greater than 2 but less than 10.
 iv. Pair of integers whose difference is an integer greater than both the integers may be $-25 - (-20) = (-5)$
 -5 is greater than -25 and -20.

Section F

39. **Read the text carefully and answer the questions:**

In a class test (+3) marks are given for every correct answer and (-2) marks are given for every incorrect answer and no marks for not attempting any question.



(i) 1. meaningless

(ii) (c) 8

Explanation: 8

(iii) (d) 13

Explanation: 13

(iv) (c) 16

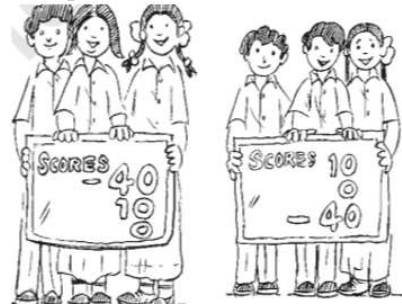
Explanation: 16

(v) (a) True

Explanation: True

40. Read the text carefully and answer the questions:

In a quiz, team A scored - 40, 10, 0 and team B scored 10, 0, - 40 in three successive rounds.



(i) 1. integer

(ii) (b) Both teams scored same

Explanation: Both teams scored same

(iii) (a) Commutative property

Explanation: Commutative property

(iv) (c) $10 + (-40)$

Explanation: $10 + (-40)$

(v) (b) False

Explanation: False