



BK BIRLA CENTRE FOR EDUCATION^T
SARALA BIRLA GROUP OF SCHOOLS
SENIOR SECONDARY | CO-ED DAY CUM BOYS' RESIDENTIAL SCHC
MIDTERM EXAMINATION 2024-25
MATHEMATICS [Answer Keys] (041)



CLASS:VI
Date: 14.09.24
Name:

Duration: 3 hrs.
MAX.MARKS:80
Exam RNo:

General Instructions:

1. This Question Paper has 5 Sections A-E.
2. Section A has 20 MCQs carrying 1 mark each
3. Section B has 5 questions carrying 02 marks each.
4. Section C has 6 questions carrying 03 marks each.
5. Section D has 4 questions carrying 05 marks each.
6. Section E has 3 case based integrated units of assessment (04 marks each).
7. All Questions are compulsory. However, an internal choice in 2 Qs of 5 marks, 2 Qs of 3 marks and 2 Questions of 2 marks has been provided.

SECTION- A

Choose the correct answer: (1 Mark for each correct answer)

- 1) In 368041 the place value of 8 is:
(a) **8000** (b) 800 (c) 80 (d) 80000
- 2) The smallest 4- digit number having four different digit
(a) **1023** (b) 1230 (c) 1203 (d) 0123
- 3) The predecessor of the smallest 4- digit number is
(a) 99 (b) **999** (c) 1000 (d) 1001
- 4) The successor of 3799 is
(a) 3798 (b) 3890 (c) **3800** (d) 3790
- 5) The whole number occurring just before 567890
(a) 567891 (b) 567800 (c) **567889** (d) 67888
- 6) The integer which is 5 more than -2 is
(a) -7 (b) -3 (c) **3** (d) 7
- 7) Smallest integer out of $-33, 37, 5, 615, -9$ is
(a) 5 (b) -9 (c) **-33** (d) 615
- 8) The number of lines that can be drawn passing through two distinct points is
(a) **1** (b) 2 (c) 3 (d) infinitely many
- 9) Every polygon has at least _____ sides.
(a) 1 (b) 2 (c) **3** (d) 4
- 10) -7 is to the right of _____ on the number line
(a) **-8** (b) -3 (c) -2 (d) -1
- 11) Which of the following has no end points?
(a) **A line** (b) a ray (c) a line segment (d) none of these
- 12) Which of the following is a composite number?

- (a) 2 (b) 3 (c) 4 (d) 5
- 13) A number which has only two factors is called a
 (a) **Prime number** (b) odd number (c) even number (d) composite number
- 14) The perimeter of a triangle of sides 3 cm, 4cm, 5cm is :
 (a) 5 cm (b) 9 cm (c) **12 cm** (d) 10 cm
- 15) Representation of data in the form of picture is called _____
 (a) Bar graph (b) **Pictograph** (c) Histogram (d) None of these
- 16) The frequency of the tally mark - ||||
 (a) 6 (b) **4** (c) 10 (d) 7
- 17) In which of the following expressions, prime factorisation has been done?
 (a) $24 = 2 \times 3 \times 4$ (b) **$56 = 2 \times 2 \times 2 \times 7$**
 (c) $70 = 7 \times 10$ (d) $54 = 2 \times 3 \times 9$
- 18) Perimeter of a rectangle is
 (a) $1 \times b$ (b) b^2 (c) l^2 (d) **$2 \times (l + b)$**
- 19) Assertion (A) – The factors of 34 are 1, 2, 17 and 34 itself
 Reason (R) – every factor is less than or equal to the given number.
 a) **Both A and R are true and R is the correct explanation of A**
 b) Both A and R are true but R is not the correct explanation of A
 c) A is true but R is false
 d) A is false but R is true
- 20) Assertion (A) – Sharper the tip, thinner will be the dot
 Reason (R) – A point determines a location
 a) **Both A and R are true and R is the correct explanation of A**
 b) Both A and R are true but R is not the correct explanation of A
 c) A is true but R is false
 d) A is false but R is true

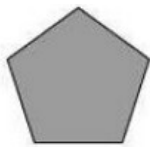
SECTION -B

(5 × 2 = 10)

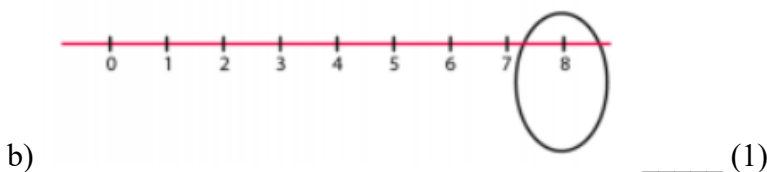
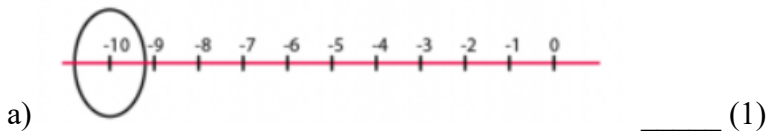
21) $1769 \times 25 \times 4$ _____ (1)
 $1769 \times 100 = 176900$ _____ (1)

OR

22) $53 - 32 = 21 - 1 = 20$ _____ (2)



23) (a) - 10 (b) + 8 _____ (2)



OR

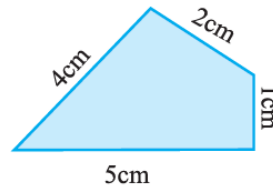
-29, -28, -27, -26, -25, -24 are the integers between -30 and -23. _____ (2)

24) (Each answer carries $\frac{1}{2}$ marks)

- a) 24 kites were sold on Friday.
- b) On Thursday the maximum number of kites was sold.
- c) On Wednesday & Friday same number of kites was sold.
- d) On Tuesday minimum number of kites was sold.

25) Required perimeter

$$= 4 \text{ cm} + 2 \text{ cm} + 1 \text{ cm} + 5 \text{ cm} = 12 \text{ cm} \quad \text{_____ (2)}$$



SECTION -C

(6 × 3 = 18)

26) Digits given are 6, 2, 7, 4, 3

$$\text{Greatest 5-digit number} = 76432 \quad \text{_____ (1)}$$

$$\text{Least 5-digit number} = 23467 \quad \text{_____ (1)}$$

$$\text{Difference between the two numbers} = 76432 - 23467 = 52965 \quad \text{_____ (1)}$$

27)

Amount of Petrol filled on Monday = 40 litres

Cost of one litre petrol = Rs 44 _____ (1)

Amount of petrol filled on next day = 50 litres

Total amount of petrol filled = $44 \times (40 + 50) = \text{Rs. } 3960$ _____ (2)

OR

Numbers on the number line always increase from left to right.

Here the smaller number is 2536 _____ (1)

So 2536 lies on the left of 2563

And $2563 > 2536$ _____ (1)

Hence, 2536 lies on the left of 2563 on the number line _____ (1)

28) Length of string = 60 cm

(a) Number of equal sides in a square = 4

$$\therefore \text{Length of each side of the square} = 60 \text{ cm} \div 4 = 15 \text{ cm.} \quad \text{_____ (1}\frac{1}{2}\text{)}$$

(b) Length of string = 60 cm

Number of equal sides in equilateral triangle = 3

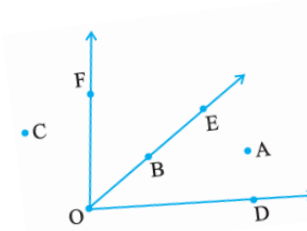
$$\therefore \text{Length of each side of the equilateral triangle} = 60 \text{ cm} \div 3 = 20 \text{ cm} \quad \text{_____ (1}\frac{1}{2}\text{)}$$

- 29) (a) The number 4 appeared minimum number of times. _____ ($\frac{1}{2}$)
 (b) Numbers 1 & 6 appear an equal number of times. _____ ($\frac{1}{2}$)

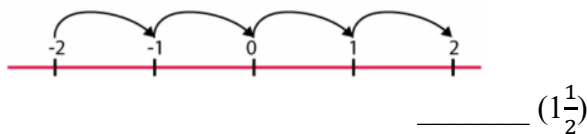
Number on Dice	Tally marks	Number of times appeared
1		4
2		4
3		4
4		4
5		5
6		4

_____ (2)

- 30) (a) In the interior of $\angle DOE$ is pt A _____ (1)
 (b) In the exterior of $\angle EOF$ is pt C _____ (1)
 (c) On $\angle EOF$ is pt B _____ (1)



- 31)(a) If we move 4 numbers to the right of -2, we will reach 2.



- (b) If we move 5 numbers to the left of 1, we will reach -4.



OR

$$\begin{aligned} \text{(a)} \quad & (-7) + (-9) + 4 + 16 \\ & = -7 - 9 + 4 + 16 \\ & = -16 + 16 + 4 \\ & = 4 \quad \text{_____} \quad (1\frac{1}{2}) \end{aligned}$$

$$\begin{aligned} \text{(b)} \quad & (37) + (-2) + (-65) + (-8) \\ & = 37 - 2 - 65 - 8 \\ & = 37 - 75 \\ & = -38 \quad \text{_____} \quad (1\frac{1}{2}) \end{aligned}$$

SECTION -D

(4 × 5 = 20)

32) Prime factorization of $825 = 3 \times 5 \times 5 \times 11$ _____ (1)

Prime factorization of $675 = 3 \times 3 \times 3 \times 5 \times 5$ _____ (1)

Prime factorization of $450 = 2 \times 3 \times 3 \times 5 \times 5$ _____ (1)

Let us try to find the highest common factor.

Here we observe that $3 \times 5 \times 5$ is the highest common factor. _____ (1)

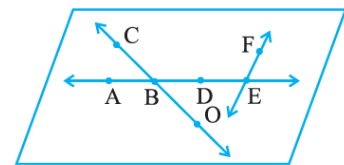
Hence HCF of 825, 675, and 450 is 75. _____ (1)

Thus, the length of the longest tape required to measure the three dimensions of the room will be 75 cm.

OR

- (a) 572 (b) 72635 (c) 12159 (d) 3150
 572 & 3150 is divisible by 2 because the last digit of the number is even. _____ (1)
 72635 & 3150 is divisible by 5 because the last digit of the number is 0 & 5. _____ (1)
 572 = 72 are the last two digits. Since 72 is divisible by 4. Hence, 572 is divisible by 4 _____ (1)
 3150 is divisible by 2 because the last digit of the number is even. _____ (1)
 12159 & 3150 are divisible by 3 because sum of all digits of the number are multiple of 3. _____ (1)

- 33) (a) Line containing point E is EF & AE _____ (1)
 (b) Line passing through A is AE _____ (1)
 (c) Line on which O lies is CO _____ (1)
 (d) Pairs of intersecting lines are CO, AE & EF, AE _____ (2)



- 34) Length of the floor = 5 m
 and its breadth = 4 m
 \therefore Area of the floor = length x breadth
 $= 5\text{m} \times 4\text{m} = 20\text{sqm}$ _____ (2)
 Side of the carpet = 3m
 \therefore Area of the square carpet = side x side = $3\text{m} \times 3\text{m} = 9\text{sqm}$ _____ (2)
 \therefore Area of the floor which is not carpeted = $20\text{sqm} - 9\text{sqm}$
 $= 11\text{sqm}$. _____ (1)

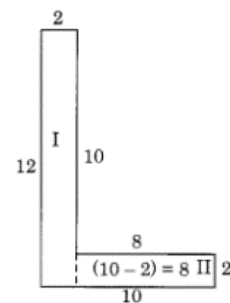
OR

Splitting the given figure into the rectangles I and II, we get

Area of the rectangle I
 $= 12\text{cm} \times 2\text{cm} = 24\text{sqcm}$ _____ (2)

Area of the rectangle II
 $= 8\text{cm} \times 2\text{cm} = 16\text{sqcm}$ _____ (2)

\therefore Total area of the whole figure = $24\text{sqcm} + 16\text{sqcm} = 40\text{sqcm}$. _____ (1)



- 35) a) $297 \times 17 + 297 \times 3$
 $= 297 \times (17 + 3)$
 $= 297 \times 20$
 $= 5940$ _____ $(2\frac{1}{2})$

- b) 854×102
 $= 854 \times (100 + 2)$
 $= 854 \times 100 + 854 \times 2$ [Using distributive property]
 $= 85400 + 1708 = 87108$ _____ $(2\frac{1}{2})$

SECTION -E

(3 × 4 = 12)

36) a) Find the prime factor of 250 and 350.

$250 = 2 \times 5 \times 5 \times 5$ _____ (1)

$350 = 2 \times 5 \times 5 \times 7$ _____ (1)

b) Find the HCF of 250 and 350.

The common factors of 250 and 350 are 2, 5 and 5.

$250 \text{ and } 350 = 2 \times 5 \times 5 = 50$ _____ (2)



37) The population of 2023 in words is : Thirty eight million one hundred fifty seven thousand three hundred eleven. _____ (1)

a) Write the place value of '1' in 35193978 is 1,00,000 _____ (1)

b) The population of 2011 in Indian system of numeration is 3,51,93,978 _____ (1)

International system of numeration is 35,193,978 _____ (1)

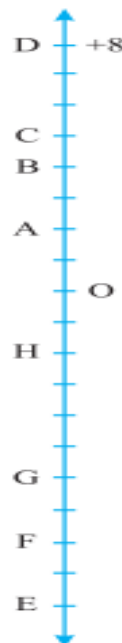
38) (Each correct answer 1mark)

(a) If point D is +8, then point F is -8.

(b) Point G is a negative integer.

(c) The least value on this number line is point E, as it represents – 10.

(e) The points in decreasing order of value are D, C, B, A, O, H, G, F, E.



*****THE END*****