

**BUDHA DAL PUBLIC SCHOOL PATIALA**  
**FIRST TERM EXAMINATION (15 September 2025)**  
**MATHEMATICS**  
**Class - VII**  
**(Set - A)**

**Time Allowed: 3 hours**

**Maximum Marks: 80**

**Instructions:**

1. All questions are compulsory.
2. Section - A : Q.No. 1 to 10 in the form of MCQ carry 1 mark each
3. Section - B : Q.No. 11 to 14 carry 2 marks each
4. Section - C : Q.No. 15 to 18 carry 3 marks each
5. Section - D : Q.No. 19 to 26 carry 4 marks each

**SECTION-A**

**Q1.** (i) When we add a positive integer and a negative integer, the result 1  
 a) is always positive    c) is zero    b) is always negative    d) can be positive or negative

(ii) Which of the following pair of terms unlike 1  
 a)  $-4zy, -3y$     b)  $5z^2y, yz^2$     c)  $7z, -12z$     d)  $-yz, zy$

(iii) Every object has a rotational symmetry of order atleast 1  
 a) 2    b) 1    c) 0    d) 3

(iv) The number of transversals that can be drawn for two given lines is 1  
 a) 2    b) 4    c) 0    d) infinite

(v) The figures which are described by three dimensions namely length, breadth, height or depth 1  
 are called \_\_\_\_\_ shapes.  
 a) 2 - D shape    b) 3 - D shape

(vi) Reciprocal of  $\frac{7}{11}$  1  
 a)  $\frac{11}{7}$     b)  $\frac{7}{11}$     c)  $-\frac{11}{7}$     d)  $-\frac{7}{11}$

(vii) Integers are not closed under 1  
 b) Division    b) Subtraction    c) Multiplication    d) Addition

(viii) Which of the following expression is a monomial? 1  
 a)  $6x^2yz$     b)  $2a + 4$     c)  $3 + z + f$     d)  $f + a + b^3$

(ix) Which of the following is correct? 1  
 a)  $-12 > -9$     b)  $-12 < -9$     c)  $(-12) + 9 > 0$     d)  $(-12) \times 9 > 0$

(x) Which of the following has only 2 lines of symmetry 1  
 a) Equilateral triangle    b) Rhombus    c) Circle    d) None of these

**SECTION-B**

2. Find  $2\frac{1}{2}$  of Rs. 10 2

3. Evaluate  $1.25 \times 0.06$  2

4. Write and draw number of lines of symmetry in isosceles triangle. 2

5. Write number of faces and edges of a cube and sphere 2

6. a) Write terms of given expression 2

$$7x^2 - 11ab + 6b^2 - 21$$

b) Identify term containing 'y' and give its coefficient

$$-3y^2 + 12xy - 6y$$

7. Draw and write vertical cross section of (a) Cuboid (b) Cone 2

8. a) Show the factors by factor tree 2

$$4x^2y + 2t^2$$

b) An expression having more than three terms called \_\_\_\_\_

9. a) What is angle of rotation of a regular polygon having order of rotation is 10. 2

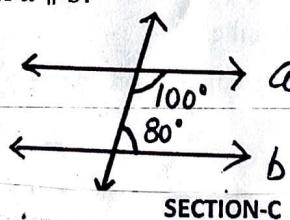
b) The angle by which object rotates is called \_\_\_\_\_.

10. How many times a wheel of radius 40cm. must rotate to go 352m ( $\pi = \frac{22}{7}$ ) 2

11. a) Find angle which is equal to its complement 2

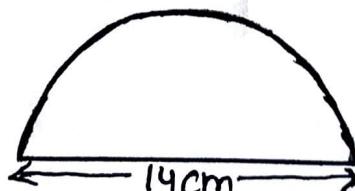
b) In the given figure check if  $a \parallel b$ .

Give a reason.



12. Solve (i)  $(-10) \times (-11) \times (-12)$  (ii)  $192 \div 16$  (iii)  $2\frac{1}{4} \times \frac{1}{2}$  3

13. Find perimeter of given figure ( $\pi = \frac{22}{7}$ ) 3



14. How many pieces of ribbon of length 0.35 m can be cut from a piece of 7m long? 3

15. Simplify and find value for  $m = -2$  3

$$(5m - 3m^2 - 6m) - 2m^2$$

16. a) If two cubes of dimension 2cm by 2cm by 2cm. are placed side by side. What would be dimensions of resulting cuboid? 3

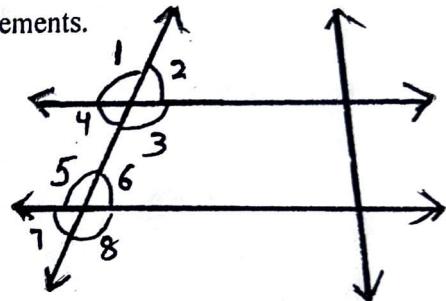
b) \_\_\_\_\_ multiplicative identity

17. a)  $(-1) \times (-1) \times (-1) \times \dots$  20 times equal to \_\_\_\_\_ 3  
 b) Write an expression for the sum of  $x$  and  $y$  subtracted from their product.  
 c) Name a triangle with both line and rotational symmetry of order more than 1.

18. a) What other name can you give to line of symmetry of isosceles triangle. 3  
 b) Write 4 letters of English alphabet having vertical line of symmetry.  
 c) Name a quadrilateral which have both line and rotational symmetry of order more than 1.

19. a) Which is greater  $\frac{3}{7}$  of  $\frac{2}{9}$  or  $\frac{1}{3}$  of  $\frac{2}{7}$  3  
 b)  $43.07 \times 100$   
 c)  $2.71 \times 5$

20. State property that is used in each of following statements. 3  
 a) If  $a \parallel b$  then  $\angle 1 = \angle 5$   
 b) If  $\angle 4 = \angle 6$  then  $a \parallel b$   
 c) If  $\angle 4 + \angle 5 = 180^\circ$  then  $a \parallel b$



21. a) Sheetal plant 11 saplings in a row in her garden. The distance between two adjacent saplings is  $\frac{3}{5} m$ . Find distance between first and last saplings. 3  
 b) Write a pair of integers whose difference gives  $-8$

#### Section - D

22. a) In the given figure  $AB \parallel CD$ . Find  $x$  4  
 Give reason

b) Name the pair of angles in the given figure. (Complementary / Supplementary)

23. a) A vehicle covers a distance of 43.2 km in 2.4 litre. How much distance will it cover in one litre of petrol?  
 b) Find area of parallelogram having base = 6cm, height = 4 cm.

24. The temperature at 12 noon was  $10^{\circ}\text{C}$  above zero. If it decreases at rate of  $2^{\circ}\text{C}$  per hour. Until 4 midnight. At what time would the temperature be  $8^{\circ}\text{C}$  below zero? What would be temperature at midnight?

25. **Case Study: 1**

4

There are 43 houses in a colony with house number 1 to 43. Their guard has gone on medical leave for one month. As a security measure, they have decided to perform guard duty, themselves. A team, with mathematical mind, has been framed to generate number by some formula for assigning duty, everyday. The number obtained as output from formula will be the house number of owner/ member of house that will perform night duty.

On the basis of above information answer the following:

- 1) The house number  $= 2(23 + 25) - 60$  will be on duty Monday night. The house on duty is
  - a) 46
  - b) 36
  - c) 56
  - d) 78
- 2) The house number  $= (3 + 7)(4 - 2)$ , will be on duty, on Saturday. The house on duty is
  - a) 20
  - b) 35
  - c) 80
  - d) 12
- 3) As a good will gesture, the Dyawan with house number  $= (-2)(-3)(-4)(-1)$  has promised to provide tea to person on duty. The house number of Dyawan is
  - a) 24
  - b) -24
  - c) 20
  - d) 12
- 4) Which is additive identity?
  - a) 0
  - b) 1
  - c) 2
  - d) 3

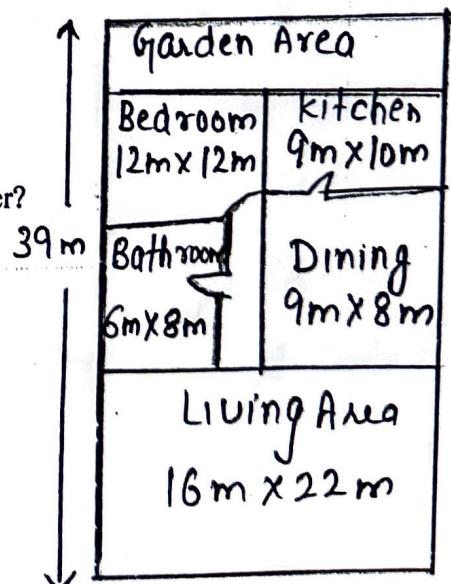
26. **Case study – 2**

4

Before the construction of any building, first plan is made to understand the area and appearance of space inside a building. Tia makes a plan for a 1 BHK home with little knowledge. She has about the area and perimeter look at the plan and answer the questions.

On the basis of above information answer the following:

- 1) The length and breadth of the garden area is
  - a)  $12\text{m} \times 26\text{m}$
  - b)  $4\text{m} \times 24\text{m}$
  - c)  $5\text{m} \times 22\text{m}$
  - d) none of these
- 2) The area of bathroom is
  - a) 6 sq. m
  - b) 36 sq. m
  - c) 12 sq. m
  - d) 48 sq. m
- 3) The perimeter of living area is
  - a) 70 m
  - b) 38 m
  - c) 76 m
  - d) 52 m
- 4) What is the perimeter of the kitchen and dining area together?
  - a) 72 m
  - b) 71 m
  - c) 70 m
  - d) 38 m



**BUDHA DAL PUBLIC SCHOOL PATIALA**  
**FIRST TERM EXAMINATION (15 September 2025)**  
**MATHEMATICS**

**Class - VII**

**(Set - B)**

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**Maximum Marks: 80**

**Instructions:**

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3. Section - B: Q.No. 11 to 15 carry 2 marks each
4. Section - C: Q.No. 16 to 21 carry 3 marks each
5. Section - D: Q.No. 22 to 26 carry 4 marks each

**SECTION-A**

**Q1.** (i) Integers are not closed under \_\_\_\_\_ 1  
 a) division    b) subtraction    c) multiplication    d) addition

(ii) The fourth term of a number pattern whose general term is  $4n - 3$  1  
 a) 13    b) 9    c) 19    d) 17

(iii) The minimum order of rotational symmetry is \_\_\_\_\_ 1  
 a) 1    b) 0    c) 2    d) 3

(iv) Two angles  $\angle 1$  and  $\angle 2$  form a linear pair, if we increase the measure of  $\angle 1$  than 1  
 measure of  $\angle 2$  will  
 a) decrease    b) increase    c) remain unchanged    d) become obtuse

(v) Which of the following is not a 3 - D shape ? 1  
 a) Cube    b) Prime    c) Sphere    d) Trapezium

(vi) Reciprocal of  $\frac{9}{4}$  1  
 a)  $\frac{9}{4}$     b)  $-\frac{9}{4}$     c)  $\frac{4}{9}$     d)  $-\frac{4}{9}$

(vii) Which of the following expression is a binomial? 1  
 a)  $6x^2yz$     b)  $2a + 4$     c)  $3 + z + f$     d)  $5 + a + b^3$

(viii) The additive inverse of  $-54$  is 1  
 a) 0    b) 54    c) 45    d)  $-\frac{1}{54}$

(ix) Which of the following is correct? 1  
 a)  $-13 > -10$     b)  $-13 < -10$     c)  $-13 + 10 > 0$     d)  $(-12) \times 9 > 0$

(x) Which of the following has only 1 line of symmetry 1  
 a) Equilateral triangle    b) Rhombus    c) Isosceles triangle    d) None of these

**SECTION-B**

2. Find  $\frac{3}{4}$  of 360

2

3. Evaluate  $456 \times 0.007$  2

4. Write and draw number of lines of symmetry in a rectangle. 2

5. Write number of faces and edges of a cuboid and cube. 2

6. a) Write terms of given express 2

$$3a^2 - 2ab + 7b^2 - 11$$

b) Identify term containing 'x' and give its coefficient

$$-2y^2 + 7xy - 6$$

7. a) What is the angle of rotation of a regular polygon having order of rotation is 3. 2

b) Name the triangle with no line of symmetry.

8. a) Show the factors by factor tree 2

$$3xy + 2z^2$$

b) Is  $3ab$  a Monomial?

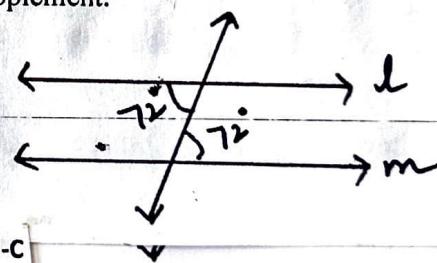
9. Draw and write vertical cross section of a sphere and a cone. 2

10. How many times a wheel of radius 4m. must rotate to go 352m? ( $\pi = \frac{22}{7}$ ) 2

11. a) Find the angle which is equal to its supplement. 2

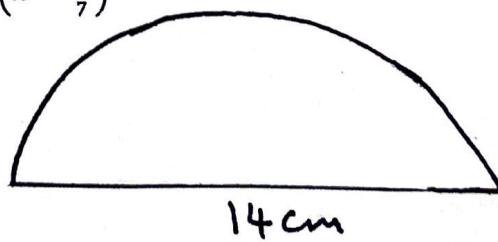
b) In the given figure check if  $l \parallel m$ ,

Give a reason.



12. Solve (i)  $(-3) \times (-6) \times (-1) \times (-5) = \underline{\hspace{2cm}}$  (ii)  $-363 \div (-11) = \underline{\hspace{2cm}}$  3

13. Find ~~Area~~ of given figure ( $\pi = \frac{22}{7}$ ) 3



14. How many pieces of ribbon of length 0.45 m can be cut from a piece of 9m long? 3

15. Simplify and find value for  $m = 2$  3

$$(5m + 3m^2 + 2m) - 6m$$

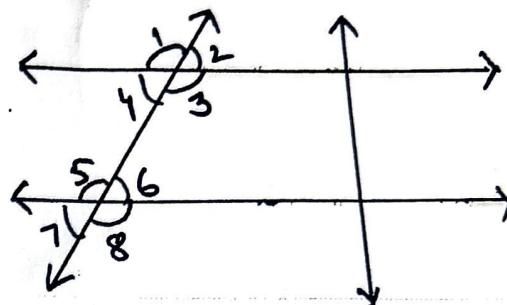
16. a) If two cubes of dimension 2cm by 2cm by 2cm are placed one on the other. What would the dimensions of resulting cuboid? 3

b) \_\_\_\_\_ is additive identity.

17. a)  $(-1) \times (-1) \times (-1) \times \dots \dots$  19 times equal to \_\_\_\_\_ 3  
 b) Product of  $x$  and  $y$  subtracted from their sum.

18. State the property that is used in each of following statements. 3

a) If  $a \parallel b$  then  $\angle 4 = \angle 6$   
 b) If  $\angle 2 = \angle 6$  then  $a \parallel b$   
 c) If  $\angle 3 + \angle 6 = 180^\circ$  then  $a \parallel b$



19. a) What other name can you give to line of symmetry of circle? 3  
 b) Write 4 letters of English alphabet having horizontal line of symmetry.  
 c) Name a quadrilateral with line symmetry but not a rotational symmetry of order more than 1.

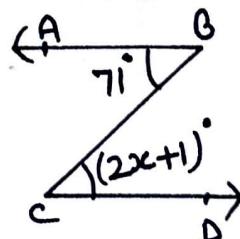
20. a) Which is greater  $\frac{2}{7}$  of  $\frac{1}{8}$  or  $\frac{3}{8}$  of  $\frac{2}{7}$  3  
 b)  $14.49 \div 7$   
 c)  $128.9 \div 1000$

21. a) Reeta plant 11 saplings in a row in her garden. The distance between two adjacent saplings is  $\frac{7}{5} m$ . Find distance between first and last saplings. 3  
 b) Write a pair of integers whose sum gives  $-8$

#### Section - D

22. a) The number of transversal that can be drawn from two given lines is \_\_\_\_\_ 4  
 b) In the given figure  $AB \parallel CD$ . Find  $x$

Give reason



23. a) Each side of a regular polygon is 2.5cm in length. The perimeter of the polygon is 12.5cm. 4  
 How many sides does the polygon have?  
 b) Find area of triangle having base = 6cm, height = 4 cm.

24. The temperature at 12 noon was  $10^\circ\text{C}$  above zero. If it decreases at rate of  $3^\circ\text{C}$  per hour. Until midnight. At what time would the temperature be  $8^\circ\text{C}$  below zero? What would be temperature at midnight? 4

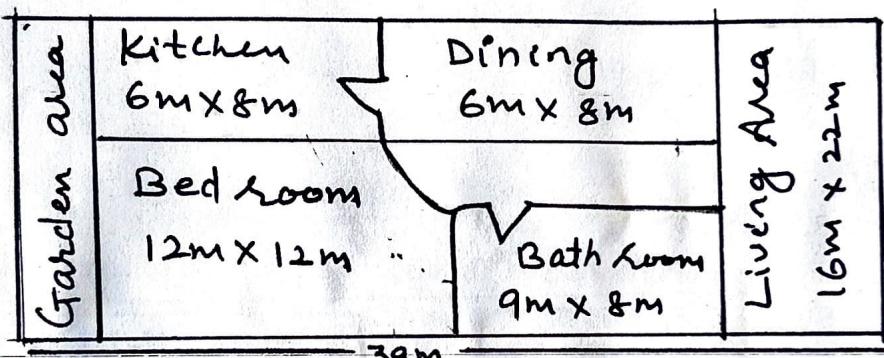
25. Case study – 1

4

Before the construction of any building, first plan is made to understand the area and appearance of space inside a building. Gurpreet makes a plan for a 1 BHK home with little knowledge as she has about the area and perimeter. Look at the plan and answer the questions.

On the basis of above information answer the following:

- 1) The perimeter of living area is  
a) 70 m      b) 38 m      c) 76 m      d) 52 m
- 2) What is the perimeter of the kitchen and dining area together?  
a) 56 m      b) 57 m      c) 28 m      d) 29 m
- 3) The area of bedroom is  
a)  $72 \text{ m}^2$       b)  $48 \text{ m}^2$       c)  $144 \text{ m}^2$       d)  $120 \text{ m}^2$
- 4) The perimeter of ~~BATH Room~~  
a) 34 m      b) 35 m      c) 32 m      d) 72 m



26. Case Study: 2

4

There are 43 houses in a colony with house number 1 to 43. Their guard has gone on medical leave for one month. As a security measure, they have decided to perform guard duty, themselves. A team with mathematical mind, has been framed to generate number by some formula for assigning duty, everyday. The number obtained as output from formula will be the house number of owner/ member of house that will perform night duty.

On the basis of above information answer the following:

- 1) The house number =  $2(23 - 25) + 40$  will be on duty Monday night. The house on duty is  
a) 46      b) 36      c) 56      d) 78
- 2) The house number =  $(7 - 3)(4 + 2)$ , will be on duty, on Saturday. The house on duty is  
a) 35      b) 20      c) 24      d) 12
- 3) As a good will gesture, the Dyawan with house number =  $(-5)(-3)(2)(1)$  has promised to provide tea to person on duty. The house number of Dyawan is  
a) 30      b) 20      c) 43      d) 12
- 4) How many prime numbers are true from 1 to 43  
a) 14      b) 12      c) 13      d) 15