BUDHA DAL PUBLIC SCHOOL PATIALA
FIRST TERM EXAMINATION (8 September 2023)
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 6 carry 1 mark each**
3. **Section – B : Q.No. 7 to 12 carry 2 marks each**
4. **Section – C : Q.No. 13 to 22 carry 3 marks each**
5. **Section – D : Q.No. 23 to 30 carry 4 marks each**

SECTION-A

1. Find the circumference of circle whose radius 14cm. $\left(\pi = \frac{22}{7}\right)$ — 1

2. If after a rotation, an object looks exactly the same then it has _____ symmetry. — 1

3. Write down a pair of integers whose sum is -3 — 1

4. Find $\frac{1}{6}$ of a) $\frac{2}{3}$ b) $\frac{6}{5}$ — 1

5. Identify the complementary and supplementary pairs of angles from the following pairs: — 1

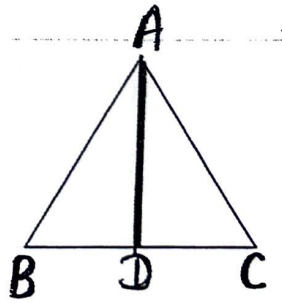
   a) 25^0, 65^0 b) 120^0, 60^0

6. Write the coefficient of x in the following: — 1

   a) $-12x$ b) $90xy$

SECTION-B

7. Find BC, if area of triangle ABC is $36cm^2$ and height AD is 3cm. — 2



8. Verify that $a \div (b + c) \neq (a \div b) + (a \div c)$ for the following values of a, b and c. — 2

   a = 16 b = − 12 c = 4

9. Find — 2

   a) $3\frac{1}{4} \div 4$ b) $4\frac{4}{7} \div \frac{1}{7}$

A

10. State whether a given pair of terms is of like or unlike terms 2

a) $4x^2y, 4y^2x$ b) $12xZ,\ 12x^2Z^2$ c) $-48x, 49y$ d) $-7x, \frac{5}{2}x$

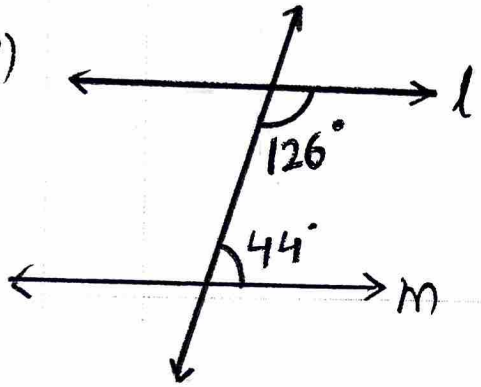
11. i) State number of lines of symmetry for the following figures. 2

a) An equilateral triangle
b) A scalene triangle

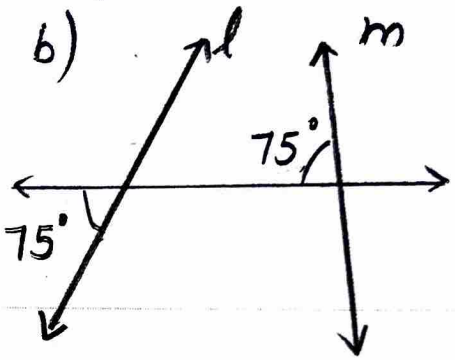
ii) What other name can you give to line of symmetry of an isosceles triangle.

12. In the given figures below decide whether l is parallel to m. 2

a)



b)



SECTION-C

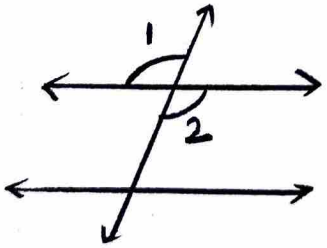
13. Reeta plant 7 saplings in a row, in her garden, the distance between two adjacent saplings is $\frac{5}{12}$ m. Find the distance between the first and last saplings. 3

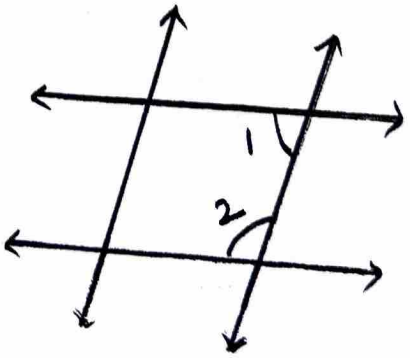
14. The side of a square park is 15.5m. Find its area. 3

15. Solve : 3

a) $(-18) \times (-5) \times (-4)$ b) $(-316) \times (-1)$ c) $1000 \times 28 \times 2$

16. a) Write the type of angles. 3





b) Define linear pair

17. If a = 3, b = – 1 find value of 3

(a) $a^2 - 2ab + b^2$ (b) $a^2 - b^2$

A

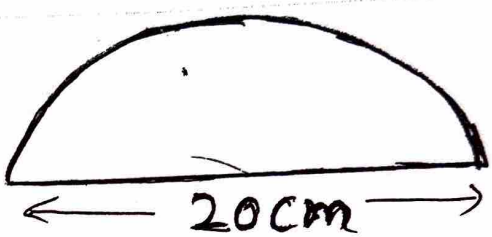
18. Fill in the blanks 3

Shape	Order of Rotation	Angle of Rotation
a) Regular Hexagon		
b) Equilateral triangle		
c) Circle		

19. i) If two cubes of dimensions 3cm by 3cm by 3cm are placed side by side. What would the dimensions of resulting cuboid be? 3

ii) _____ is additive identity.

20. Find perimeter of adjoining figure which is semicircle including its diameter 3



21. An elevator descends into a mine shaft at rate of 8m/min. If descends starts from 10m above ground level, how long will it take to reach -470m 3

22. a) What will be the sign of product if we multiply 8 negative integers and 1 positive integer? 3

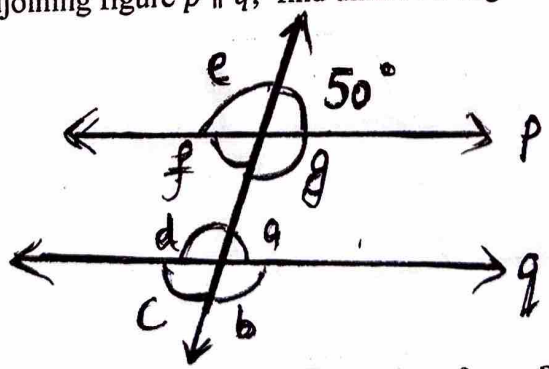
b) Product of numbers y and z subtracted from 10.

c) Name a triangle with both line and rotational symmetries of order more than 1.

SECTION-D

23. A circle of radius 4cm is cut out from a square piece of an aluminium sheet of side 8cm. What is area of left over aluminium sheet (take $\pi = 3.14$) 4

24. In adjoining figure $p \parallel q$, find unknown angles. 4



25. Simplify the expression and find value of $x = 2, a = -1, b = -3$ 4

$2x - a - 4 - 5 - 2a + 2b$

A

26. a) 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 Rohini scores (−5) marks in this test, though she has got 7 correct answers. How many questions has she attempted incorrectly ? (4)

b) $0 \div (-12)$

c) $(-49) \div (-7)$

27. a) Can we have a rotational symmetry of order more than 1 whose angle of rotation is 17^0. ? 4

b) Write four letters of English alphabet that have reflectional symmetry about a vertical mirror.

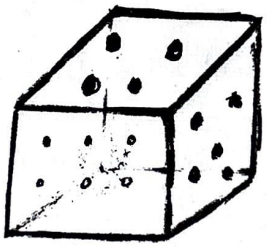
c) What cross sections do you get when you give a

i) vertical cut (ii) horizontal cut to a circular pipe

28. a) The minute hand of a circular clock is 15cm long. How far does tip of minute hand move in 1 hour (take $\pi = 3.14$) 4

b) Sushant read $\frac{1}{3}$ part of a book in 1 hour. How much part of book will be read in $2\frac{1}{5}$ hours.

29. Following is the picture of die, cubical in shape. If it contains dots numbered 1 to 6 on the six faces on it, respectively. 4



On the basis of given information, answer the following questions by choosing the correct option from the given four options in each question:

1) The shape of each face of this die is
   a) Isosceles trapezium b) Rhombus c) Rectangle d) Square

2) The number of faces with odd number of dots is
   a) 3 b) 6 c) 5 d) 4

3) The number of faces of this dice is
   a) 10 b) 12 c) 6 d) 8

4) The number of vertices of this die are
   a) 5 b) 8 c) 12 d) 6

30. A municipal committee has completed one year of its tenure. The chairman of committee has asked people to evaluate its performance by assigning marks in the scale – 2 to + 2. The residents of area have made a sample of 200 men. Women each to give their feedback. 4

Following is detail of feedback given below by men and women.

S.No.	Marks awarded	Number of men
1	– 2	18
2	– 1	24
3	0	12
4	1	34
5	2	112
S.No.	Marks awarded	Number of men
1	– 2	23
2	– 1	29
3	0	14
4	1	46
5	2	88

Based on above information answer the following question by choosing correct option from given four options in each question:

1) The number of men and women who gave – 2 as feedback are
   a) 41 b) 45 c) 23 d) 89

2) Total number of marks given by men and women with 2 as feedback are
   a) 200 b) 400 c) 600 d) 900

3) The number of men and women who gave – 1 as feedback are
   a) 53 b) 54 c) 55 d) 56

4) Total number of women who did not assign negative marks are
   a) 345 b) 879 c) 148 d) 123

BUDHA DAL PUBLIC SCHOOL PATIALA
FIRST TERM EXAMINATION (8 September 2023)
MATHEMATICS
Class – VII
(Set – B)

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4. **Section – C : Q.No. 13 to 22 carry 3 marks each**
5. **Section – D : Q.No. 23 to 30 carry 4 marks each**

SECTION-A

1. Find the area of circle whose radius 7cm. $\left(\pi = \frac{22}{7}\right)$ 1

2. In complete turn, the number of times an object looks exactly the same is called _____ of rotational symmetry. 1

3. Write down a pair of integers whose difference is -5 1

4. Multiply and reduce to lowest form (if possible) 1

   a) $\frac{2}{3} \times 1\frac{1}{3}$ b) $\frac{2}{3} \times \frac{3}{8}$

5. Identify the complementary and supplementary pairs of angles from the following pairs : 1

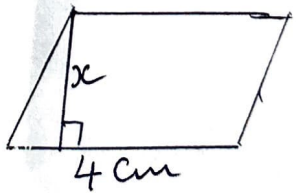
   a) 63^0, 27^0 b) 100^0, 80^0

6. Write the coefficient of x in the following: 1

   a) xyz b) $19xy$

SECTION-B

7. Find height x, if area of parallelogram $1824cm^2$ and base is 4cm. 2



8. Verify that $a \div (b + c) \neq (a \div b) + (a \div c)$ for the following values of a, b and c. 2

   a = 18 b = − 3 c = 6

9. Find 2

   a) $\frac{4}{9} \div \frac{6}{3}$ b) $2\frac{1}{4} \div \frac{1}{4}$

B

10. State whether a given pair of terms is of like or unlike terms 2

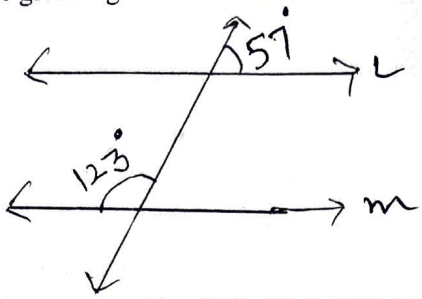
a) $7x, 7y$ b) $7mn, 8nm$ c) $9x^2y, 8y^2x$ d) $4x^2Z, 3z^2x$

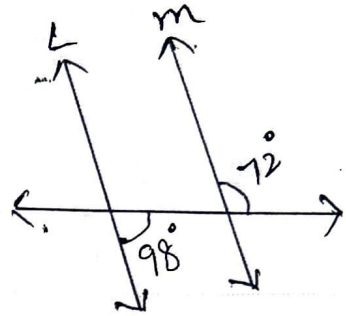
11. i) State number of lines of symmetry for the following figures. 2

a) A parallelogram b) A regular Hexagon

ii) What other name can you give to line of symmetry of a circle?

12. In the given figures below decide whether L is parallel to m. 2





SECTION-C

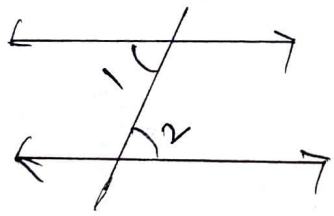
13. Sahil plant 6 saplings in a row, in his garden the distance between two adjacent saplings is $\frac{3}{5}$ m. Find the distance between the first and last saplings. 3

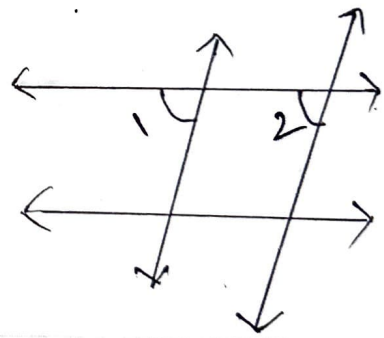
14. The length of a rectangle is 7.1cm and its breadth is 2.5cm. What is the area of the rectangle? 3

15. Solve : 3

a) $(-15) \times 0 \times (-18)$ b) $10 \times (-5) \times (15)$ c) $70 \times 100 \times 8$

16. a) Write the type of angles. 3





b) Define adjacent angles.

17. Find the value of following expressions when $x = -2$ 3

(a) $19 - 5x^2$ (b) $5x - 2$

18. Fill in the blanks 3

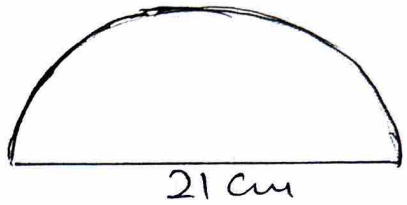
Shape	Order of Rotation	Angle of Rotation
a) Square		
b) Rectangle		
c) Rhombus		

B

19. i) If two cubes of dimensions 2cm by 2cm by 2cm are placed side by side. What would the dimensions of resulting cuboid be? 3

ii) _____ is multiplicative identity.

20. Find perimeter of adjoining figure which is semicircle including its diameter 3



21. The temperature at 12 noon was 10^0C above zero. If it decreases at the rate of 3^0C per hour until mid night. At what time would the temperature be 8^0C below zero? What would be temperature at mid night? 3

22. a) $(-1) \times (-1) \times (-1) \times$ ..... 25 times equal to _____ 3

b) Sum of numbers x *and* y subtracted from their product.

c) Name a quadrilateral with both line and rotational symmetry of order more than 1.

SECTION-D

23. A municipal committee has completed one year of its tenure. The chairman of committee has asked people to evaluate its performance by assigning marks in the scale -2 to $+2$. The residents of area have made a sample of 200 men. Women each to give their feedback.

Following is detail of feedback given below by men and women.

S.No.	Marks awarded	Number of men
1	– 2	23
2	– 1	29
3	0	14
4	1	46
5	2	88

S.No.	Marks awarded	Number of women
1	– 2	18
2	– 1	24
3	0	12
4	1	34
5	2	112

B

Based on above information answer the following question by choosing correct option from given four options in each question:

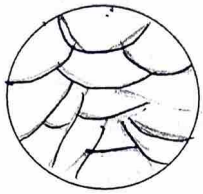
1) The number of men and women who gave – 1 as feedback are
   a) 53 b) 41 c) 43 d) 45

2) Total number of marks given by men and women with 0 as feedback are
   a) 41 b) 26 c) 34 d) 89

3) Total marks assigned by all women are
   a) 198 b) 498 c) 298 d) 345

4) The number of men who did not assign negative means are
   a) 345 b) 879 c) 148 d) 123

24. Following is the picture of a football, on observing this football answer the following questions: 4



On the basis of given information, answer the following questions by choosing the correct option from the given four options in each question:

1) The number of the faces of the given ball has
   a) 1 b) 3 c) 2 d) 4

2) What is the shape of football?
   a) Circle b) Semi circle c) Sphere d) None of these

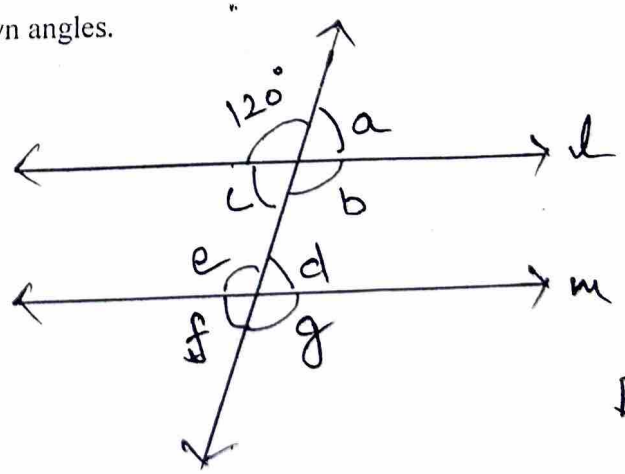
3) What is the relation between radius and diameter
   a) d = 2r b) r = 2d c) $r \div 2 = d$ d) None of these

4) How many vertices do this figure have
   a) 5 b) 2 c) 1 d) 0

25. A garden~~er~~ wants to fence a circular garden of diameter 42m. Find length of rope he needs to purchase if he makes 3 rounds of fence. Also find cost of rope, if it costs Rs. 6 per metre

(take $\pi = \frac{22}{7}$)

26. In adjoining figure $l \parallel m$, find unknown angles. 4



B

27. Simplify the expression and find value of $a = 5, b = -2$ 4

$3(a^2 + ab) + 3 - ab$

28. a) 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 Rupali scores 20 marks in this test, through she has got 12 correct answers. How many questions has she attempted incorrectly? [illegible] 4

b) $(-30) \div 15$

c) $(-36) \div (-9)$

29. a) Can we have a rotational symmetry of order more than 1 whose angle of rotation is 45^0. 4

b) Write four letters of English alphabet that have reflectional symmetry about a horizontal mirror.

c) What cross sections do you get when you give a

i) vertical cut (ii) horizontal cut to a brick

30. a) How many times a wheel of radius 42cm must rotate to go 352m ? (take $\pi = \frac{22}{7}$) 4

b) A vehicle covers a distance of 43.2 km in 2.4 hours. How much distance will it cover in one hour of petrol?

B