

**Greenlawns School, Worli**  
**Final Examination 2023-2024**  
**Mathematics**

STD: VI  
Date: 12/02/2024

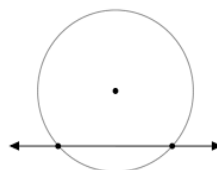
Marks: 80  
Time: 2 hours

**Attempt all the questions**

**Question 1.**

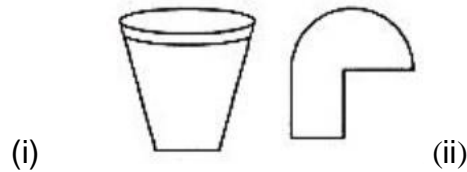
Choose one correct answer to the questions from the given options: **[10]**

- a. When the given data is arranged from smallest to largest, the value of the middle data is the:  
(a) Mean                      (b) Median                      (c) Mode                      (d) None
- b. The perimeter of an equilateral triangle of side 14 cm is:  
(a) 32 cm                      (b)  $32 \text{ cm}^2$                       (c) 42 cm                      (d)  $42 \text{ cm}^2$
- c. Bisecting  $90^\circ$  gives you the following angle:  
(a)  $60^\circ$                       (b)  $30^\circ$                       (c)  $15^\circ$                       (d)  $45^\circ$
- d. A scalene triangle has \_\_\_\_\_ line(s) of symmetry:  
(a) zero                      (b) one                      (c) two                      (d) three
- e. Way of representing the given raw data in the form of a table is known as :  
(a) Tabulated data                      (b) Frequency distribution table  
(c) Pictograph                      (d) All of the above
- f. Name of the quadrilateral with each of its angle  $90^\circ$  is:  
(a) Rhombus                      (b) Trapezium                      (c) Rectangle                      (d) Parallelogram
- g. Solve:  $3x - 4x + 7x$   
(a)  $6x$                       (b)  $7x$                       (c)  $-8x$                       (d)  $-6x$
- h. The point where all the three medians of a triangle meet is called the:  
(a) Orthocentre                      (b) Centroid                      (c) Both are true                      (d) Both are false
- i. The value for x in the equation  $2x + 5 = 21$  is:  
(a) 13                      (b) 14                      (c) 10                      (d) 8
- j. In the given figure, the straight line intersecting the circle is called the:  
(a) Tangent                      (b) Secant                      (c) Chord                      (d) Diameter



**Question 2.**

- a. Find the value of equal angles, if the angles of a triangle are  $2x^\circ$ ,  $4x^\circ$ ,  $4x^\circ$  [2]
- b. From the given figure, check if they are symmetrical or not. Also, draw the line of symmetry if they are symmetrical. [2]










- b. Four-fifth of a number is greater than three-fourth of that number by 8. Find the number. [3]
- c. A square and rectangle have equal areas. If each side of square is 38 cm and length of rectangle is 19 cm. Find: [3]
- i. area of square    ii. breadth of rectangle    iii. perimeter of the rectangle


**Question 3.**

- a. Find the mean of: 4, 10, 13, 16 and 17. [2]
- b. Draw a circle of radius 5.4 cm. In the circle, draw a chord  $AB=8$  cm. [2]
- c. State TRUE or FALSE: [3]
- i. If two parallel sides of a trapezium are equal, it is called an isosceles trapezium.
- ii. A square is a type of rectangle.
- iii. A rhombus is a quadrilateral in which all sides are equal.
- d. From the sum of  $7x^2 - 5x + 3$  and  $-3x^2 + 7x + 2$ , subtract  $x^2 + x + 1$ . [3]

**Question 4.**

- a. Find the median of: 9, 11, 15, 12, 14, 12, 13, 16, 13, 11 [2]
- b. Construct angle  $120^\circ$  and bisect it using a ruler and a compass only. [2]
- c. The school has a rectangular flower garden which is 15 m long and 12 m wide. One bag of fertilizer can cover 5 square meters. Calculate: [3]
- i. Area of the flower garden
- ii. How many bags of fertilizers will the school need to buy to cover the entire garden?
- d. The sale of electric bulbs on different days of a week is shown below. Observe the picture given below and answer the questions that follow: [3]

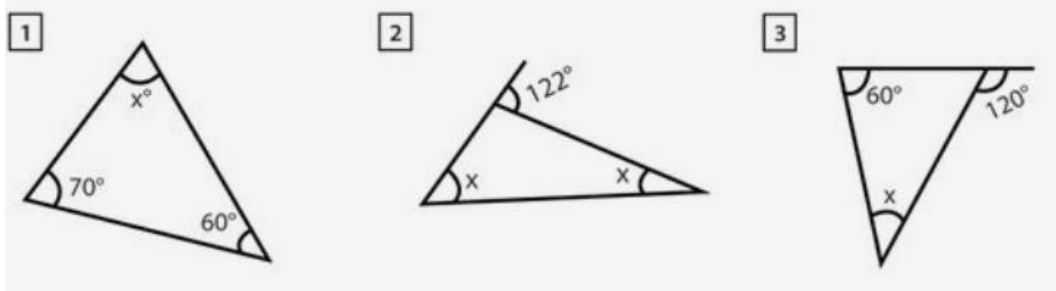
Days	Number of bulbs
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	
Sunday	

 = 2 bulbs

- i. How many bulbs were sold on Friday?
- ii. On which day maximum number of bulbs were sold?
- iii. If one bulb was sold at the rate of Rs.10, what was the total earning on Tuesday?

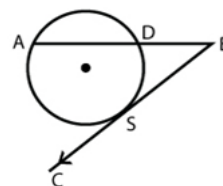
**Question 5.**

- a. Fill in the blanks: [2]
  - i. The letter 'H' has \_\_\_\_\_ lines of symmetry.
  - ii. A circle has \_\_\_\_\_ number of lines of symmetry.
- b. Two opposite angles of a parallelogram are  $75^\circ$  each. Find the other two angles. Give reason for your answer. [2]
- c. Divide:  $21a^3b^3 + 35a^4b^2 - 56a^2b^4$  by  $-7a^2b^2$  [3]
- d. Find the unknown marked angles in each triangle given below: [3]



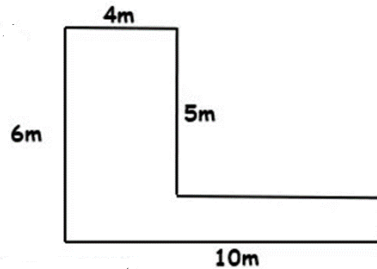
**Question 6.**

- a. Identify and redraw the segment(s) in the figure given: [2]



- b. Find the mean of first five multiples of 4. [2]

- c. Find the perimeter and area of the given figure: [3]



- d. Draw a line segment  $OP = 8$  cm. Mark a point  $Q$  such that  $OQ = 3$  cm. Draw a perpendicular onto  $OP$  through the point  $Q$ . [3]

**Question 7.**

- a. Draw two letters of English alphabet having only one line of symmetry. [2]
- b. Three angles of a quadrilateral are equal. If the fourth angle is  $39^\circ$ , find the measure of equal angles. [2]
- c. In a triangle  $ABC$ ,  $\angle B$  is 24 degrees greater than  $\angle A$ . If  $\angle C$  is 9 degrees smaller than  $\angle B$ , find the three angles. [3]
- d. The age of a man and the age of his daughter differ by 21 years, and the sum of their ages is 49 years. Find their ages. [3]

**Question 8.**

- a. Construct a triangle  $XYZ$  with  $XY = 6$  cm,  $YZ = 4$  cm and  $ZX = 5$  cm. [2]
- b. Do as directed: [4]
- (i) The mean of 12, 22, 25, 27, 36,  $x$ , 38 is 30. Find the value of  $x$ .
- (ii) If the mean of  $x$ ,  $x+2$ ,  $x+3$ ,  $x+4$ ,  $x+5$ ,  $x+10$  is 44, find the value of  $x$ .

- c. The following table shows the number of Maruti cars sold by five dealers in a particular month.

Dealer	Saya	Bagga Links	D.D. Motors	Bhasin Motor	Competent Motors
Cars sold	60	40	20	15	10

- Represent the given information with the help of a suitable bar graph. [4]

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