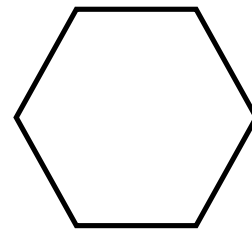


General Instructions:

- (i). All questions are compulsory.
- (ii). This question paper contains **30** questions divided into four Sections A, B, C and D.
- (iii). **Section A** comprises of 6 questions of **1 mark** each. **Section B** comprises of 6 questions of **2 marks** each. **Section C** comprises of 10 questions of **3 marks** each and **Section D** comprises of 8 questions of **4 marks** each.
- (iv). Use of Calculators is not permitted

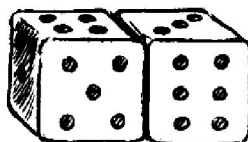
SECTION – A

1. Find the number of lines of symmetry in the given figure:
2. If $p = 2$, find the value of $p^2 - 2p - 100$.
3. What is the circumference of a circular disc of radius 14 cm?
4. Two dice are placed side by side with 5 + 2, what is the total on the face opposite to the given numbers.
5. Express 3125 using exponential notation.
6. Express 540 as a product of powers of prime factors



SECTION – B

7. State the number of lines of symmetry for the following figures:
(a) A square (b) A rectangle
8. The perimeter of a rectangle is 130 cm. If the breadth of the rectangle is 30 cm, find its length. Also find the area of the rectangle.
9. The population of a city decreased from 25,000 to 24,500. Find the percentage decrease.
10. Expand by expressing powers of 10 in the exponential form: (i) 172 (ii) 5,643
11. What cross-sections do you get when you give a (i) vertical cut (ii) horizontal cut to the following solids? (a) A die (d) A circular pipe
12. Two dice are placed side by side as shown in below figure. What the total would be on the face opposite to (a) 6 + 2 (b) 3 + 5



SECTION – C

13. Simplify: $\frac{3^5 \times 10^5 \times 25}{5^7 \times 6^5}$

14. Juhi sells a washing machine for Rs 13,500. She loses 20% in the bargain. What was the price at which she bought it?

15. Subtract:

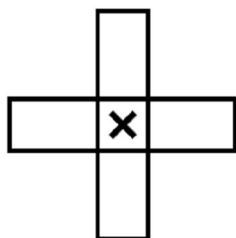
(i) $5a^2 - 7ab + 5b^2$ from $3ab - 2a^2 - 2b^2$

(ii) $4pq - 5q^2 - 3p^2$ from $5p^2 + 3q^2 - pq$

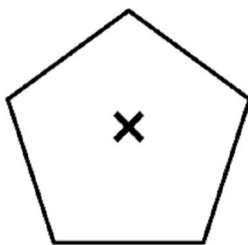
16. Represent these numbers on the number line. (i) $-\frac{6}{4}$ (ii) $\frac{7}{6}$ (iii) $\frac{11}{7}$

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

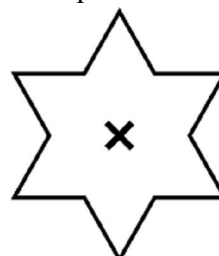
18. Give the order of the rotational symmetry of the given figures about the point marked 'x'



(a)



(b)



(c)

19. Find the value of the following expressions when $n = -2$.

(i) $5n - 2$ (ii) $5n^2 + 5n - 2$ (iii) $n^3 + 5n^2 + 5n - 2$

20. Construct a triangle PQR, given that $PQ = 3$ cm, $QR = 5.5$ cm and $\angle PQR = 60^\circ$.

21. Draw a line, say AB, take a point C outside it. Through C, draw a line parallel to AB using ruler and compasses only.

22. The area of a square park is the same as of a rectangular park. If the side of the square park is 60 m and the length of the rectangular park is 90 m, find the breadth of the rectangular park.

SECTION – D

23. Anil deposited Rs. 20,000 for saving as a fixed deposit in a bank at 10% per annum. Find the amount he will get after 5 years. What are the benefits of savings?

24. Find the value of (i) $\frac{3}{13} \div \left(\frac{-4}{65}\right)$ (ii) $\frac{-7}{12} \div \left(\frac{-2}{13}\right)$

25. (a) What should be taken away from $3x^2 - 4y^2 + 5xy + 20$ to obtain $-x^2 - y^2 + 6xy + 20$?

(b) From the sum of $3x - y + 11$ and $-y - 11$, subtract $3x - y - 11$.

26. Express the number appearing in the following statements in standard form.
- (a) The distance between Sun and Saturn is 1,433,500,000,000 m
 - (b) Mass of Uranus = 86,800,000,000,000,000,000,000 kg
 - (c) The distance between Saturn and Uranus is 1,439,000,000,000 m
 - (d) 60,230,000,000,000,000,000,000 molecules are contained in a drop of water weighing 1.8 gm.

27. Construct $\triangle ABC$ such that $AB = 2.5$ cm, $BC = 6$ cm and $AC = 6.5$ cm. Measure $\angle B$.

28. Three cubes each with 2 cm edge are placed side by side to form a cuboid. Sketch an oblique or isometric sketch of this cuboid.

29. Complete the following table:

Shape	Centre of Rotation	Order of Rotation	Angle of Rotation
Square			
Rectangle			
Rhombus			
Equilateral triangle			

30. Through a rectangular field of length 90 m and breadth 60 m, two roads are constructed which are parallel to the sides and cut each other at right angles through the centre of the fields. If the width of each road is 3 m, find
- (i) the area covered by the roads.
 - (ii) the cost of constructing the roads at the rate of Rs 110 per m^2 .

