# CBSE Sample Paper Class 7 Math: 

SUBJECT: MATHEMATICS CLASS : VII

## General Instructions:

(i). All questions are compulsory.
(ii). This question paper contains $\mathbf{3 0}$ questions divided into four Sections A, B, C and D.
(iii). Section A comprises of 6 questions of $\mathbf{1}$ mark each. Section B comprises of 6 questions of $\mathbf{2}$ marks each. Section C comprises of 10 questions of $\mathbf{3}$ 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 $p^{2}-2 p-100$.
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) $5 a^{2}-7 a b+5 b^{2}$ from $3 a b-2 a^{2}-2 b^{2}$
(ii) $4 p q-5 q^{2}-3 p^{2}$ from $5 p^{2}+3 q^{2}-p q$
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 ' $\mathbf{x}$ '

(a)

(b)

(c)
19. Find the value of the following expressions when $n=-2$.
(i) $5 \mathrm{n}-2$ (ii) $5 \mathrm{n}^{2}+5 \mathrm{n}-2$ (iii) $\mathrm{n}^{3}+5 \mathrm{n}^{2}+5 \mathrm{n}-2$
20. Construct a triangle PQR , given that $\mathrm{PQ}=3 \mathrm{~cm}, \mathrm{QR}=5.5 \mathrm{~cm}$ and $\angle \mathrm{PQR}=60^{\circ}$.
21. Draw a line, say $A B$, take a point $C$ outside it. Through $C$, draw a line parallel to $A B$ 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 $3 x^{2}-4 y^{2}+5 x y+20$ to obtain $-x^{2}-y^{2}+6 x y+20$ ?
(b) From the sum of $3 x-y+11$ and $-y-11$, subtract $3 x-y-11$.
26. Express the number appearing in the following statements in standard form.
(a) The distance between Sun and Saturn is $1,433,500,000,000 \mathrm{~m}$
(b) Mass of Uranus $=86,800,000,000,000,000,000,000,000 \mathrm{~kg}$
(c) The distance betwen Saturn and Uranus is $1,439,000,000,000 \mathrm{~m}$
(d) $60,230,000,000,000,000,000,000$ molecules are contained in a drop of water weighing 1.8 gm .
27. Construct $\triangle \mathrm{ABC}$ such that $\mathrm{AB}=2.5 \mathrm{~cm}, \mathrm{BC}=6 \mathrm{~cm}$ and $\mathrm{AC}=6.5 \mathrm{~cm}$. Measure $\angle \mathrm{B}$.
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${ }^{2}$.
