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# MATHEMATICS MOCK TEST

Class: IX | Set: 24

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Time: 1 Hour 30 Minutes | Written Marks: 35 | Viva: 5 | Total: 40 Marks

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NAME: \_\_\_\_\_

ROLL NO: \_\_\_\_\_

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## SECTION A

(1 Mark Each)

1. Point  $(-3, -5)$  lies in which quadrant of the Cartesian plane?
2. Find the volume of a cube whose edge is 4 cm long.
3. If a diameter of a circle is 14 cm, find the length of the radius.
4. Check whether  $x = 3, y = 1$  is a solution of the equation  $2x + 5y = 11$ .
5. If two angles of a linear pair are equal, find the measure of each angle.

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## SECTION B

(2 Marks Each)

6. Find the area of an isosceles triangle whose base is 12 cm and the length of its equal sides is 10 cm each.
7. Two supplementary angles are in the ratio 4 : 5. Find the angles.
8. Find the mean of the first seven natural numbers.
9. Prove that the diagonals of a rectangle are equal in length.
10. Find the curved surface area of a right circular cone whose base radius is 7 cm and slant height is 25 cm.

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## SECTION C

(3 Marks Each)

11. In a circle of radius 13 cm, a chord is at a distance of 5 cm from the centre. Find the length of the chord.
12. Show that the quadrilateral formed by joining the mid-points of the sides of a rhombus is a rectangle.
13. The taxi fare in a city is ₹20 for the first kilometre and ₹12 per km for the subsequent distance. Write a linear equation for this information taking distance as  $x$  and total fare as  $y$ .
14. Find the volume of a hemisphere whose radius is 2.1 cm. (Use  $\pi = \frac{22}{7}$ )

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**SECTION D****(4 Marks Each)**

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In an isosceles triangle  $ABC$  with  $AB = AC$ ,  $D$  and  $E$  are points on  $BC$  such that  $BE = CD$ . Show that  $AD = AE$ .

- 16.** A lead shot of diameter 6 cm is melted and cast into a right circular cylinder of height 24 cm. Find the radius of the base of the cylinder.

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**VIVA VOCE****(5 Marks)**

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- **Statistics:** What is the difference between an ungrouped and a grouped frequency distribution?
- **Circles:** What is the angle subtended by an arc at the centre compared to the angle at the circumference?
- **Mensuration:** What happens to the volume of a sphere if its radius is halved?
- **Linear Equations:** How do we find the point where a line crosses the x-axis?
- **Quadrilaterals:** Is every square a parallelogram? Is every parallelogram a square?