

MATHS4U

Assignment

+9 Class

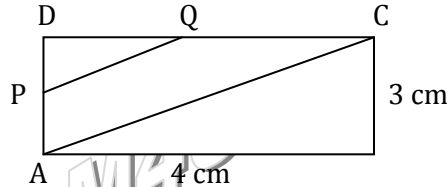
It's all about believing

Topic:-

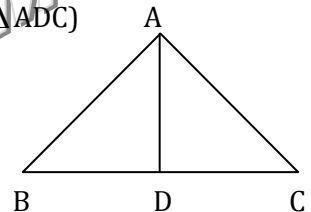
Question Numbers 1 to 8 carry 1 mark each.

Select the correct alternative from the alternative given against each of the following questions (1 - 8):

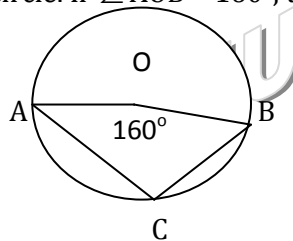
1. If $x = -2$ and $y = 3$ is a solution of the equation $3x - y = a$, then value of a is (a) 19 (b) -9 (c) -21 (d) -18
2. If the diagonals of a quadrilateral bisect each other, then the quadrilateral must be a (a) Square (b) parabellogram (c) rhombus (d) rectangle
3. In the adjoining figure, ABCD is a rectangle. P and Q are mid - point of AD and DC respectively. Then length of PQ is (a) 5 cm (b) 4 cm (c) 2 (d) 2.5 cm



4. In the adjoining figure, if D is the mid - point of BC, then the incorrect statement is (a) $\text{ar}(\triangle ABD) = \text{ar}(\triangle ADC)$ (b) $\text{ar}(\triangle ABD) = \text{ar}(\triangle ABC)$ (c) $\text{ar}(\triangle ABD) = \frac{1}{2} \text{ar}(\triangle ABC)$ (d) $\text{ar}(\triangle ABD) = 2 \text{ar}(\triangle ADC)$



5. In the adjoining figure, O is the centre of the circle. If $\angle AOB = 160^\circ$, then $\angle ACB$ is (a) 160° (b) 200° (c) 80° (d) 100°

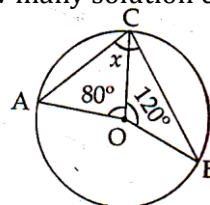


6. The graph of the equation $3x - 4y = 8$ cuts the y-axis at the point (a) (2, 0) (b) (0, 2) (c) (3, 0) (d) (0, -2)
7. $X = 3, y = -2$ is a solution of the equation (a) $3x - 2y = 11$ (b) $x + y = 5$ (c) $4x - 3y = 18$ (d) $3x + y = 5$
8. A coin as tossed 700 times and the outcomes were noted as

Question Numbers 9 to 14 carry 2 marks each.

9. Solve the equation: $\frac{6x-7}{3x+1} = \frac{2x+7}{x+5}, x \neq -\frac{1}{3}, -5.$

10. Write the equation $3x = 2$ in the form of $ax + by + c = 0$ and write the values of a, b and c .
11. Write four solutions of the equation $2x + y = 7$. How many solutions can be found for the equation?
12. If O is the centre of the circle, find the value of x .



13. The curved surface area of a right circular cylinder of height 14 cm is 88 sq cm. Find the diameter of the base of the cylinder. Or Find the volume of a sphere whose surface area is 154 sq m.

Question Numbers 15 to 24 carry 3 marks each.

14. Three cubes whose edges measure 3 cm, 4 cm and 5 cm are melted to form a single cube. Find the surface area of the new cube.

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15. The circumference of the base of a 9 m high wooden solid cone is 44 m. Find the volume of the cone.
16. Histogram for the marks obtained by 100 students in a test is given in the adjacent figure. Answer the following questions (a) How many students obtained marks between 30 and 40? (b) How many students obtained marks less than 40? (c) How many students obtained marks ≥ 20 ?

Answer

1.C 2.B 3.D 4.D 5.D 6.D 7.C 8.C 9.X = 2 10 a = 3, b = 0, c = -2 11. (0, 7) $(\frac{7}{2}, 0)$, (1, 5) and

(3, 1) 12. 80° 13. 154 sq. cm OR 13. R = $\frac{7}{2}$ cm, $179\frac{2}{3}$ cu cm. 14. 216 sq cm 15. 462 m^3

16. (a) From the figure, it is clear that number of students securing marks between 30 and 40 = 20
(b) Number of students securing marks less than 40 = $20 + 5 + 15 + 10 = 25$ (c) Number of students securing marks ≥ 20 marks = $5 + 20 + 25 + 15 + 10 = 75$