The Champions' Maths Olympiad (CMO)

The Champions' Olympiads

Syllabus and Sample Paper

Class 9 (Syllabus)

There will be 45 multiple choice questions from the below mentioned syllabus.
The time duration will be 1 hour.

1. Number systems
2. Polynomials
3. Coordinate Geometry
4. Linear Equations in Two Variables
5. Introduction to Euclid Geometry
6. Lines and Angles
7. Triangles
8. Quadrilaterals
9. Areas of Parallelograms and Triangles
10. Circles
11. Heron's Formula
12. Surface Areas and Volumes
13. Constructions
14. Statistics

Sample Paper

1. If x = -1, y = 2 is a solution of the equation 3x + 4y = k, find the value of k.

   A. 0 B. 5 C. 1 D. -1

2. Write the degree of the following polynomial 9x3+7x2+6x

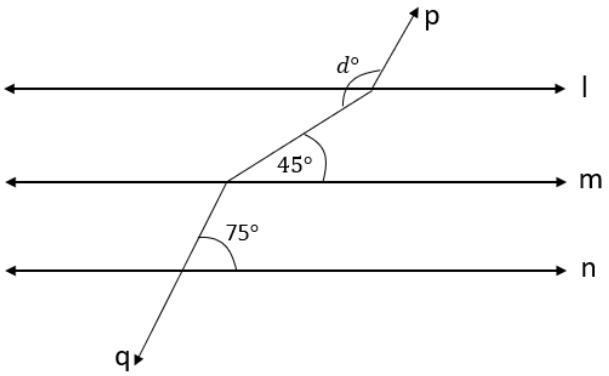
   A. 2 B. 3 C. 6 D. 7

3. In the given figure, l || m || n, p || q,

   find ∠d.

   A. 120^0 B. 150^0

   C. 140^0 D. 135^0



4. The coordinates of the point A, that is below the X-axis and lying on the Y-axis at a distance of 4 units are:

   A. (-4,0) B. (0,-4) C. (0,4) D. (0,-8)

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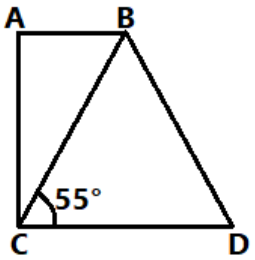
6. Euclid's third postulate is about:-

   A. Squares B. Angles C. Circles D. Lines

7. In the given figure, BC = BD. Find ∠ ABD.

   A. 120° B. 125°

   C. 75° D. 118°



8. Having APB and CQD as two parallel lines, then the bisectors of the angles APQ, BPQ, CQP and PQD will form a shape. Identify the name of the shape formed?

   A. Square B. Rectangle C. Rhombus D. any other parallelogram

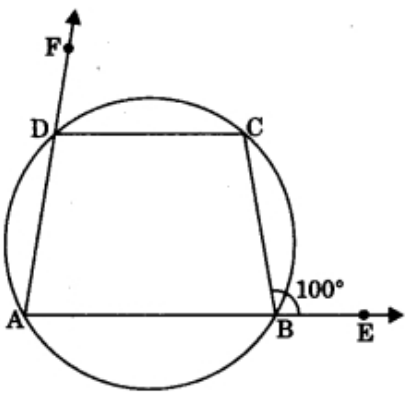
9. In the figure, ABCD is a rectangle and PQCD is a parallelogram. Find out the area of ABCD, if DC= 10cm and BC = 8 cm.

   A. $50cm^2$ B. $40cm^2$ C. $30cm^2$ D. None of these

10. In figure, sides AB and AD of a quadrilateral ABCD are produced to E and F respectively. If ∠CBE = 100°, then find ∠CDF.

    A. 100° B. 90°

    C. 130° D. 80°



11. Find the measure of an angle, if seven times its complement is 10° less than three times its supplement.

A. 20° B. 15° C. 30° D. 25°

12. Sides of a triangle are in the ratio of 12 : 17 : 25 and its perimeter is 540cm. Find its area.

A. 9000 B. 5400 C. 1200 D. 8900

13. The radius of a sphere is decreased by 50 % by what % does its curved surface area decrease?

A. 63.33% B. 50% C. 75% D. 25%

14. Find the mean marks of 25 students in the English exam (out of 100). Data is given below

A. 81.5 B. 3.2

C. 86.2 D. 83

x	60	70	85	90	92	94	96
f	2	6	4	5	3	3	2