The Champions' Maths Olympiad (CMO)

Syllabus and Sample Paper

Class 8 (Syllabus)

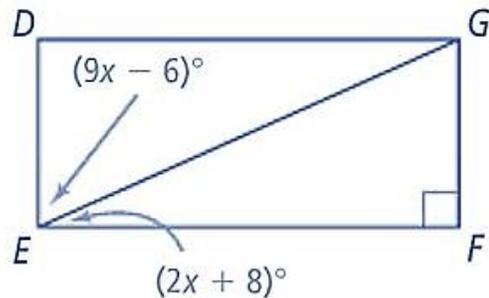**There will be 45 multiple choice questions from the below mentioned syllabus.
The time duration will be 1 hour.**

1. Rational Numbers
2. Linear Equations in One Variable
3. Understanding Quadrilaterals
4. Practical Geometry
5. Data Handling
6. Square and Square Roots
7. Cube and Cube Roots
8. Comparing Quantities
9. Algebraic Expressions and Identities
10. Visualizing Solid Shapes
11. Mensuration
12. Exponents and Powers

Sample Paper

1. Which of the following is not a rational number?

   A. $\sqrt{36}$ 　　　　 B. $\sqrt{121}$ 　　　　 C. $\sqrt{8}$ 　　　　 D. $\sqrt{16}$

2. The ratio of flour to water in a mixture is 5 : 2. If total mixture weighs 560 gm. Find the weight of flour in the mixture.

   A. 700 gm 　　　　 B. 120 gm 　　　　 C. 690 gm 　　　　 D. 400 gm

3. Identify the correct value of x from the given figure?
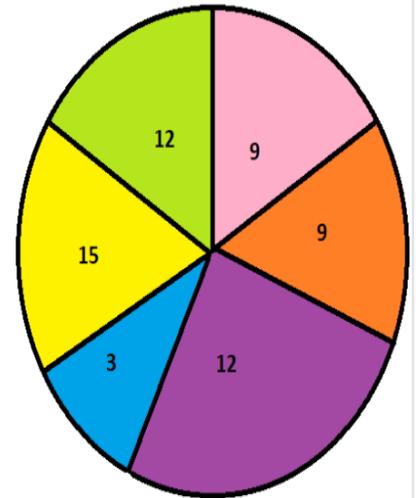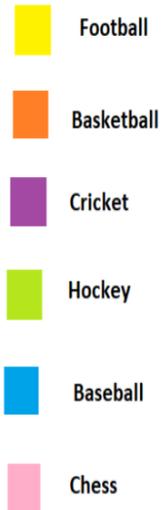
   A. 8 　　　　 B. 2

   C. 9 　　　　 D. 6

4. The diagonals of a rhombus bisect each other at _____ angles.

   A. acute   B. right   C. obtuse   D. reflex

5. In a class of 60 students , given pie chart shows the number of students who like their particular sport. Which two sports will have equal percentage in the pie chart?

   ◻ Football
   ◻ Basketball
   ◻ Cricket
   ◻ Hockey
   ◻ Baseball
   ◻ Chess

   A. hockey and chess
   B. hockey and baseball
   C. hockey and cricket
   D. basketball and hockey

6. Find the square of 112?

   A. 12444   B. 12644   C. 12544   D. 14444

7. What will be the compound interest on Rs 5000 , if it is compounded half yearly for 1 year 6 months at 8% per annum?
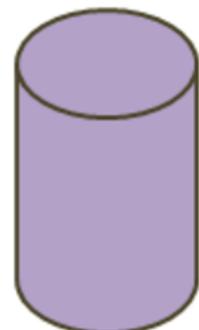
   A. Rs 620.32   B. Rs 604.32   C. Rs 624.45   D. Rs 624.32

8. If the product of difference of two numbers and sum of the numbers is 60 and the product of the two numbers is equal to the square of half of a, find a and b.

   A. 2 and 8   B. 6 and 4   C. 3 and 5   D. 4 and 2

9. Determine the faces, vertices, and edges of the following shape.

   A. 3 faces, 0 vertices, and 0 edges
   B. 2 faces, 0 vertices, and 0 edges
   C. 1 faces, 0 vertices, and 0 edges
   D. 0 faces, 0 vertices, and 2 edges

10. The area of a trapezium is 1586 cm² and the distance between its parallel sides is 26 cm. If one of the parallel sides is 84 cm, find the other.

   A. 50 cm   B. 40 cm   C. 38 cm   D. None of the above

11. Express 0.0000673 in standard form.

   A. 6.73×10^{-13}

   B. 6.73×10^{-6}

   C. 6.73×10^{-5}

   D. 6.73×10^{-8}

12. If 14 men can complete one work in 45 hours, how many men are required to do same work in 21 hours?

   A. 16 men   B. 30 men   C. 32 men   D. 6 men