



Section A: Multiple Choice Questions

1. **MCQ 1:** What is the value of $2^3 \times 2^4$?
 - a) 8
 - b) 16
 - c) 32
 - d) 64
2. **MCQ 2:** Solve for x: $3x - 7 = 11$
 - a) $x = 4$
 - b) $x = 6$
 - c) $x = 7$
 - d) $x = 8$
3. **MCQ 3:** What is the value of $\sin(30^\circ)$?
 - a) 0
 - b) 0.5
 - c) 1
 - d) Undefined
4. **MCQ 4:** What is the sum of the measures of the interior angles of a quadrilateral?
 - a) 180°
 - b) 270°
 - c) 360°
 - d) 450°

Section B: Short Answer Questions

5. **Short Answer 1:** Solve for x: $2x^2 - 5x - 3 = 0$
6. **Short Answer 2:** Define the term "congruent triangles" and explain how to prove two triangles are congruent.
7. **Short Answer 3:** What is the formula to find the volume of a cylinder, and explain each term in the formula.
8. **Short Answer 4:** If the mean of 8 observations is 20, what will be the new mean if each observation is divided by 2?

Section C: Long Answer Questions



9. **Long Answer 1:** Describe the steps involved in constructing an angle bisector of a given angle.
10. **Long Answer 2:** Solve the system of equations: $2x + y = 7$
 $3x - 2y = 4$
11. **Long Answer 3:** Explain the concept of trigonometric ratios (sine, cosine, tangent) and how they are used to solve triangles.
12. **Long Answer 4:** If the sum of the first n terms of an arithmetic progression is given by $S_n = 3n^2 - 2n$, find the first term and the common difference.

Section D: Competency Based Questions (15 points each)

13. **Competency Based Question 1:** You are planning a school event that involves designing a stage. Develop a blueprint for the stage layout, considering factors such as dimensions, seating arrangements, and accessibility.
14. **Competency Based Question 2:** You are organizing a survey among your classmates to gather data on their internet usage habits. Design a survey questionnaire with relevant questions and explain how you would analyze the data collected.
- 15.