CLASS X - TELANGANA MATHEMATICS (MOCK QUESTIONS)

Short Questions (4 Marks Each)

1. Sets — Venn Diagram Application

In a class of 60 students, 32 like Mathematics, 28 like Science, and 18 like both.

Find the number of students who like only Mathematics.

2. Trigonometry — Angle Evaluation

If $\tan\theta = 3/4$, find $\sin\theta$ and $\cos\theta$.

Long Questions (7 Marks Each)

3. Quadratic Equations — Roots and Nature

Solve the quadratic equation:

$2x^2 - 7x + 3 = 0$

and determine the nature of its roots.

4. Tangents & Secants to a Circle

From an external point P, two tangents are drawn to a circle with center O.

Prove that OP ■ AB, where A and B are points of contact.