10th Standard Mathematics - Question Paper

Instructions:

1. Answer all questions.
2. Show all steps clearly.
3. Use appropriate formulas where necessary.

1. Solve: $(x + 3)(x - 5) = 0$.

2. Find the roots of the quadratic equation: $x^2 - 5x + 6 = 0$ using factorization.

3. Simplify: $(5x^2 - 3x + 2) - (2x^2 + 4x - 1)$.

4. If the perimeter of a rectangle is 36 cm and its length is twice its width, find its dimensions.

5. Solve for x: $2x - 3 = 7$.

6. A train travels 240 km in 4 hours. Find its average speed.

7. Find the area of a circle with a radius of 7 cm. (Use pi = 3.14)

8. Solve: $3/5 + 2/7$ and express the answer in its simplest form.

9. Find the value of x if $3x + 2 = 5x - 8$.

10. The sum of the angles in a triangle is 180 degrees. If two angles are 50 degrees and 60 degrees, find the third angle.