

Past Papers for Math Olympics - 2023

Instructions:

- Answer all questions.
- Show all necessary working.
- Calculators are not allowed unless stated.

Section A: Short Questions

1. Simplify: $(3x^2 - 2x + 5) - (x^2 + 4x - 3)$
2. Factorize: $x^2 - 5x + 6$
3. Solve for x: $2x + 3 = 11$

Section B: Word Problems

4. A train travels 120 km in 2 hours. What is its average speed?
5. The sum of three consecutive odd numbers is 51. Find the numbers.
6. A rectangle has a length of 10 cm and an area of 80 cm². Find its width.

Section C: Geometry

7. Find the area of a triangle with base 12 cm and height 5 cm.
8. If the radius of a circle is 7 cm, find its circumference. (Use $\pi = \frac{22}{7}$)

Section D: Bonus Problem

9. A number is such that twice the number added to 5 is equal to the number squared. Find the number.

End of Paper.