Mathematics Assignment: Algebra, Geometry, and Probability

Assignment Summary

Objective:

To strengthen understanding and application of core mathematical concepts by solving 20 questions each from Algebra, Geometry, and Probability, while clearly showing all steps and rough work for all calculations.

Key Points and Summary:

In this assignment, I explored three fundamental areas of mathematics: Algebra, Geometry, and Probability. For each topic, I attempted 20 questions, carefully solving them with complete step-by-step methods, justifications, and rough work for all calculations.

In Algebra, I focused on simplifying expressions, solving linear and quadratic equations, and manipulating polynomials. I ensured correct application of identities and verified solutions through substitution where necessary.

In Geometry, I worked with properties of triangles, circles, angles, and coordinate geometry. I used theorems like Pythagoras' Theorem, congruence, and similarity rules to support my answers. Diagrams were drawn wherever required to enhance clarity.

In Probability, I solved questions on basic probability, complementary events, and compound events using tree diagrams and probability formulas. I paid special attention to interpreting real-world contexts into probability models.

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This assignment helped improve my analytical skills, problem-solving accuracy, and confidence in expressing mathematical reasoning. Writing out every step also made me aware of minor mistakes and encouraged a deeper understanding of concepts.