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MATH Exam Paper

Subjective Questions

1. Derive the quadratic formula from the general form of a quadratic equation.

Answer:

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2. Solve the following system of equations using substitution method: $2x + y = 10$ and $3x - y = 5$.

Answer:

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3. What are eigenvalues and eigenvectors? Provide an example.

Answer:

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4. Explain how the binomial theorem can be used to expand expressions.

Answer:

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5. Explain the concept of mathematical induction and prove the sum formula for the first n integers.

Answer:

MCQ Questions

6. What is the derivative of x^2?

    a) 1   b) 2x

    c) x^2   d) 2x^2

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7. What is the value of pi?

    a) 3.14   b) 3.1416

    c) 3.14159   d) 3.141

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8. What is the area of a circle with radius 3?

    a) 9π b) 6π

    c) 3π d) π