

24 Lecture - MTH101

Important Subjective

What is Newton's Method?

Answer: Newton's Method is a numerical method used to find the roots of a function.

How does Newton's Method work?

Answer: Newton's Method involves approximating the root of a function by using the tangent line of the function at a point.

Who was Rolle's Theorem named after?

Answer: Rolle's Theorem was named after Michel Rolle.

What does Rolle's Theorem state?

Answer: Rolle's Theorem states that if a function has the same value at the endpoints of an interval, then there must be at least one point in the interval where the derivative of the function is zero.

What is the Mean Value Theorem?

Answer: The Mean Value Theorem is a theorem in calculus that states there must be at least one point in an interval where the slope of the tangent line to the function is equal to the average rate of change of the function over the interval.

What is the relationship between Rolle's Theorem and Mean Value Theorem?

Answer: Mean Value Theorem is an extension of Rolle's Theorem.

What is the significance of Rolle's Theorem in calculus?

Answer: Rolle's Theorem has important applications in calculus, especially in optimization problems.

What is the significance of Mean Value Theorem in calculus?

Answer: Mean Value Theorem has important applications in calculus, especially in understanding the behavior of functions.

How can we use Rolle's Theorem to find the maximum or minimum value of a function?

Answer: We can use Rolle's Theorem to show that the maximum or minimum value of a function must occur at a point where the derivative of the function is zero.

How can we use the Mean Value Theorem to find a point where the slope of the tangent line is equal to the average rate of change of the function over an interval?

Answer: We can use the Mean Value Theorem to find a point where the slope of the tangent line is equal to the average rate of change of the function by setting the equation of the theorem and solving for c .