

22 Lecture - MTH101

Important Subjective

What are relative extrema?

Answer: Relative extrema are the local maximum or minimum values of a function within a given interval.

How do you find relative extrema?

Answer: To find relative extrema, we take the first derivative of the function, set it equal to zero, and solve for x . We then use the second derivative test to determine the nature of each critical point.

What is a critical point in calculus?

Answer: A critical point in calculus is a point on the function where the derivative is zero or undefined.

What is the second derivative test?

Answer: The second derivative test is a method used to determine whether a critical point corresponds to a relative maximum, relative minimum, or neither.

What is the second derivative of a function?

Answer: The second derivative of a function is the derivative of its first derivative.

What is a relative maximum?

Answer: A relative maximum is the highest point of a function within a given interval.

What is a relative minimum?

Answer: A relative minimum is the lowest point of a function within a given interval.

Can a function have more than one relative maximum or minimum?

Answer: Yes, a function can have multiple relative extrema.

What are some applications of relative extrema in economics?

Answer: Relative extrema can represent the maximum or minimum values of a cost function, profit function, or utility function in economics.

What are some applications of relative extrema in physics?

Answer: Relative extrema can represent the maximum or minimum values of a velocity or acceleration function in physics.