

Name _____

Finding the Middle Ground: Exploring the Mean Value Theorem

Open-Ended Response Answer Key

1. The mean value theorem states that there is at least one point in an interval where the instantaneous rate of change of a function equals the average rate of change of the function over the interval.
2. It is used to analyze the average rate of change of quantities such as profit in economics and velocity in physics.
3. It provides a bridge between average and instantaneous values of a function, allowing us to understand its behavior over an interval.
4. It guarantees the existence of points where the instantaneous rate of change matches the average rate of change, providing insight into the behavior of the function over an interval.

