

# 23 Lecture - MTH101

## Important Subjective

**What are critical points of a function?**

**Answer:** Critical points of a function are the points where the derivative of the function is either zero or undefined.

**What is a relative maximum of a function?**

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

**What is a relative minimum of a function?**

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

**How do you find the critical points of a function?**

**Answer:** To find the critical points of a function, we need to take the derivative of the function and solve for where the derivative is zero or undefined.

**What is the second derivative test?**

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

**What is an absolute maximum of a function?**

**Answer:** An absolute maximum of a function is the highest point of the function over its entire domain.

**What is an absolute minimum of a function?**

**Answer:** An absolute minimum of a function is the lowest point of the function over its entire domain.

**What are optimization problems?**

**Answer:** Optimization problems involve maximizing or minimizing a function subject to certain constraints.

**How do you solve an optimization problem?**

**Answer:** To solve an optimization problem, we need to set up the problem, take the derivative of the function, solve for where the derivative is zero or undefined, and check whether the critical point corresponds to a maximum or minimum.

**What is the maximum or minimum value of a function?**

**Answer:** The maximum or minimum value of a function is the highest or lowest point of the function within a given interval or over its entire domain.