

## Calculus Preview

Calculus Answers Two Questions:

1. How to find the slope of a curve.

Finding the slope of a curve at a particular point on that curve can be done by finding a Tangent line (a line that touches the curve only once). To approximate the slope of the actual curve we can use a line through the point of tangency and a second point on the curve. This type of line is called a secant line (a line that touches a curve twice)

\*\*\*The closer the two points, the better the approximation\*\*\*

The slope of the secant line, which will approximate the slope of the curve, is found by:

$$m_{sec} = \frac{f(x+h) - f(x)}{h}$$

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2. How to find the area under a curve.

To approximate area under a curve we can break down the area into separate rectangles, find the area of each rectangle, and add up those areas to find the total area under the curve.

\*\*\*The more rectangles, the better the approximation\*\*\*

