



The mean slope of a function f between a point A and B is given by

$$\frac{\Delta y}{\Delta x} = \frac{f(B) - f(A)}{B - A}$$

As we make A and B closer to each other Δx decreases. As Δx decreases the mean slope is more representative of the rate of change of f in the interval $[A; B]$.

When Δx is infinitely small, we have the precise slope of a given point on the function. This slope is represented by the tangent line, which is parallel to the given point.

$$\lim_{\Delta x \rightarrow 0} \frac{\Delta y}{\Delta x}$$

