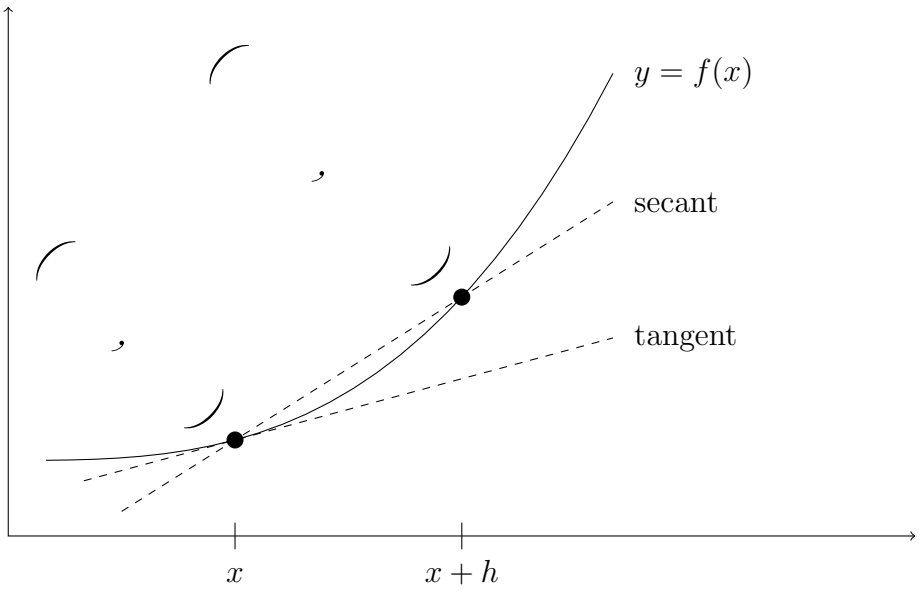
5 Minute Mini-Lesson

The Limit Definition of Derivative

Suppose the height of a ball is a function of time $y = f(x)$.



$$\text{————————} = \text{slope of secant} = \text{difference quotient} = \text{average rate of change} = \text{average velocity}$$

$$\lim_{h \to} \text{————————} = \text{slope of tangent} = \text{derivative} = \text{rate of change} = \text{velocity}$$