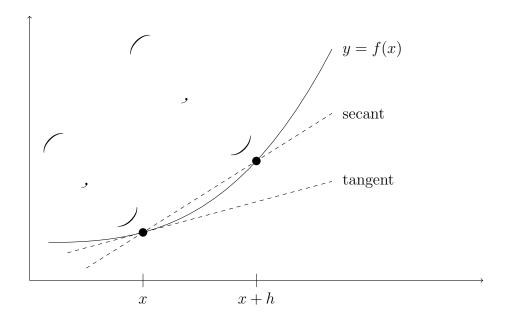
## 5 Minute Mini-Lesson

## The Limit Definition of Derivative

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



$${\textstyle \frac{\Delta y}{\Delta x}} {\textstyle =} {\textstyle \frac{y_2 - y_1}{x_2 - x_1}} {\textstyle =}$$

$$----------------= \frac{\text{slope of}}{\text{secant}} = \frac{\text{difference}}{\text{quotient}} = \frac{\text{average}}{\text{rate of}} = \frac{\text{average}}{\text{velocity}}$$