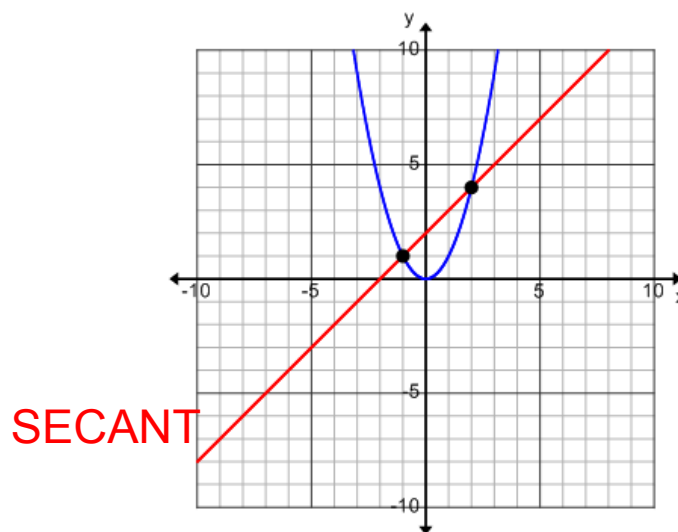


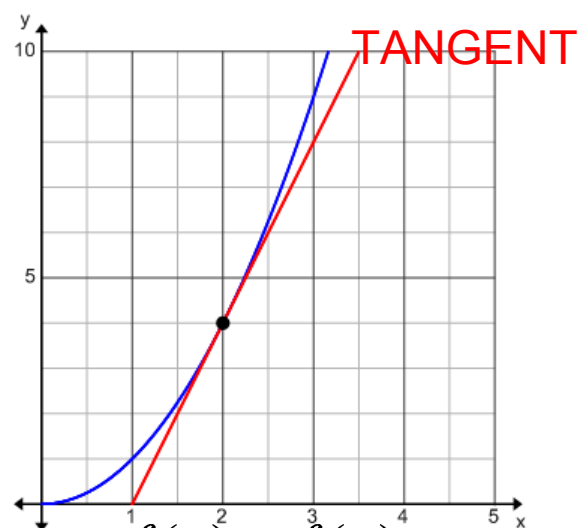
MHF 4UI - EXAM REVIEW

Chapter 3 - Rates of Change

Slope of a Secant: Slope of a line between 2 points on a curve.



Slope of a Tangent: Slope of a line AT a POINT.



Use either Formula 1: $\lim_{x \rightarrow a} \frac{f(x) - f(a)}{x - a}$

OR

Formula 2: $\lim_{h \rightarrow 0} \frac{f(a + h) - f(a)}{h}$

Example: Given $y = \frac{1}{x - 2}$

a) Find the slope of the secant between the points (4, 1/2) and (3, 1)

b) Find the slope of the tangent when $x = 3$ (use Formula 1)

$$\lim_{x \rightarrow a} \frac{f(x) - f(a)}{x - a}$$

c) Find the slope of the tangent when $x = 3$ (use Formula 2)

$$\lim_{h \rightarrow 0} \frac{f(a+h) - f(a)}{h}$$

*** Check out word problems too!!