

# Calculus AB

2-3  
(Day 2)

Product Rule, Quotient Rule, Trigonometric Derivatives,  
and Higher Order Derivatives

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## Trig Derivatives

$$\frac{d \sin x}{dx} =$$

$$\frac{d \cos x}{dx} =$$

$$\frac{d}{dx} (\tan x) = \underline{\hspace{2cm}}$$

$$f(x) = \sec x, f'(x) = \underline{\hspace{2cm}}$$

$$g(x) = \csc x, g'(x) = \underline{\hspace{2cm}}$$

$$h(x) = \cot x, h'(x) = \underline{\hspace{2cm}}$$

Complete the table without using the Quotient Rule. (pg 124)

<u>Function</u>	<u>Rewrite</u>	<u>Differentiate</u>	<u>Simplify</u>
19) $y = \frac{x^2 + 2x}{3}$			

Find an equation of the tangent line to the graph of  $f$  at the indicated point.

67)  $f(x) = \tan x$        $(\frac{\pi}{4}, 1)$

Assignment:

Pg. 124

19 - 53 odd,  
58, 61, 66,  
83, 84, 86,  
93, 97, 99,  
105-108 all