Calculus 5.2 Key Points

Product Rule:

If $h(x) = f(x) \bullet g(x)$, then $h'(x) = [f'(x) \bullet g(x)] + [f(x) \bullet g'(x)]$

Quotient Rule:

If $h(x) = \frac{f(x)}{g(x)}$, then $h'(x) = \frac{[f'(x) \bullet g(x)] - [f(x) \bullet g'(x)]}{[g(x)]^2}$

Chain Rule:

If $h(x) = f(g(x)$, then $h'(x) = f'(g(x)) \bullet g'(x)$

Derivatives of Trigonometric Functions:

$f(x) = sin(x), f'(x) = cos(x)$	$f(x) = cos(x), f'(x) = -sin(x)$
$f(x) = tan(x), f'(x) = sec^2(x)$	$f(x) = cot(x), f'(x) = -cot^2(x)$
$f(x) = sec(x),$ $f'(x) = sec(x) \bullet tan(x)$	$f(x) = csc(x),$ $f'(x) = -csc(x) \bullet cot(x)$