

DERIVATIVE RULES

TEXT: 2.1, 2.2, 2.3

LAST NAME	FIRST NAME	DATE
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1 (4 points). Find $f'(x)$ if $f(x) = x\sqrt{x}\sin(x)$

2 (4 points). Find $g'(x)$ if $g(x) = \frac{x + \cos(x)}{x^2 - 3}$

3 (4 points). Find $h'(x)$ if $h(x) = \frac{7 + \sin x}{\cos x}$

4 (4 points). Find an equation of the line tangent to the graph of the function

$$F(x) = \frac{(2x + 1)\tan x}{x - 1}$$

at the point $(0, 0)$

5. Find the second derivative for each of the functions in this lab, except the last one.