

MATH 2200 - DIFFERENTIAL CALCULUS, Fall, 2005

QUIZ 3 9/28/05

Name : _____ *SOLUTIONS* _____

Find the derivative of the following functions:

1.

$$f(x) = (1 - 3x^3)^{10}$$

$$f'(x) = 10(1 - 3x^3)^9(-9x^2) = -90x^2(1 - 3x^3)$$

2.

$$f(x) = \sqrt{\sin(x)}$$

$$f(x) = (\sin(x))^{\frac{1}{2}}$$

$$f'(x) = \frac{1}{2}(\sin(x))^{-\frac{1}{2}} \cos(x) = \frac{\cos(x)}{2\sqrt{\sin(x)}}$$