

10/2/2000  
Dr. Lunsford

MA303 Calculus I  
Quiz 7

Name: \_\_\_\_\_  
(20 Points Total)

I. Let  $f(x) = \frac{x^3 - 3x + 2}{x^2 - 1}$ . Find  $f'(x)$  by using the quotient rule. Do not simplify your answer. (4 points)

II. Find the indicated derivatives. Clearly indicate your answers. You do not need to simplify your answers. (4 points each – 16 total)

(a)  $f(x) = \sqrt[3]{x^2} \tan x$

$$f'(x) =$$

(b)  $y = (t^3 - 3t + 1)\cos t$

$$\frac{dy}{dt} =$$

(c)  $f(x) = \frac{\sin x}{x}$

$$\frac{d}{dx} f(x) =$$

(d)  $y = x^2 \sin x + 2x \cos x$

$$D_x y =$$