9/26/2001 MA303 Calculus I Name:_____
Dr. Lunsford Quiz 7 (20 Points Total)

I. Let $f(x)=\dfrac{1-7x-x^4}{x^2-x+1}$. 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) $f(x)=\sqrt[4]{x^3}\sec x$

$f'(x)=$

(b) $y=t^3\cos(7t)$

$\dfrac{dy}{dt}=$

(c) $f(x)=\sqrt[3]{x^3+7x-11}$

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

III. Below you are given a portion of the graph of $y=\dfrac{1}{\sqrt{1-x}}$. Find the equation of the tangent line to the graph at $x=0$ and graph the tangent line on the same axes below. (4 points)