

Math 165 (Chris Kurth)  
Spring 2008  
Quiz 4

**Show all work. Answers without work will not receive credit.**

1. (5 points) Evaluate:

$$\frac{d}{dx} \left( \frac{1}{(x^2 - x + 1)^7} \right)$$

2. (5 points) Let  $f(x) = \cos^6(\sin(x))$ . Find  $f'(x)$ .

3. (5 points) Express  $D_x(F(x^2 + 1))$  in terms of  $F(x)$ .

4. (5 points) Find the equation of the tangent line to  $y = \cot x$  at  $(\frac{\pi}{4}, 1)$ .