

Name: _____

Quiz 5

Math 251

You have 20 minutes to complete this quiz. When you're finished, first check your work if there is time remaining, then turn it in. You may use your class notes (i.e. not the online notes), and a scientific calculator, but not a graphing one. You may not consult other people or the internet. **Show all your work.**

1. (4 points) What is $\frac{d}{dx}[\sin^{-1}(2x)]$?

2. (8 points) Use the Inverse Function Theorem to show that $\frac{d}{dx}[x^{1/3}] = \frac{1}{3}x^{-2/3}$.

- 3.** (8 points) The graph of $x \sin\left(\frac{\pi}{2}y\right) = y$ contains the point $(1, 1)$. Find the equation of the tangent line there.