Calculus Honors
Homework - 3 Q2

Exercise 1.

Use the definition of the derivative to prove that:

1. $(5)' = 0$
2. $(x)' = 1$
3. $(x^2)' = 2x$.

Exercise 2.

Prove that if a function f is differentiable at x=c, the f is continuous at x=c.

Exercise 3.

Use the rules to find the following derivatives

1. $(10)' =$
2. $(3x^2)' =$.
3. $(\frac{1}{5}x^5 + x)' =$.
4. $(2\sqrt{x})' =$.