

Math 165: Honors Calculus I
Quiz 1 Sept. 8, 1994

Name: _____

1. Prove that for all real numbers $a, b \in \mathbb{R}$, $(-a)b = -(ab)$.

2. Define the following:

a) an inductive set.

b) the natural numbers, \mathbb{N} .

c) $\sum_{k=1}^n a_k$.

3. Prove $\sum_{k=1}^n k^2 = \frac{n(n+1)(2n+1)}{6}$ by induction.

4. Find all x such that $|1 - 3x| < 4$.