Math 166: Honors Calculus II   Name:_____

Quiz 8   *Mar. 25, 1999*

1. a) If $\{a_n\}$ is an infinite sequence, define $\lim\limits_{n\to\infty} a_n = L$.

   b) Using the definition, prove that $\lim\limits_{n\to\infty} \dfrac{n + (-1)^n}{n} = 1$.

2. a) State the Monotone Convergence Theorem for sequences.

b) Prove a) for the case of increasing sequences.