Problem Set 4   Real Analysis 1   Due 10/18/2002

Each problem is worth 5 points. Adequate demonstration is required for full credit.

1. Prove that $\lim\limits_{x \to \infty} \dfrac{7x}{x+4}$ exists directly from the definition.

2. Prove that $\lim\limits_{x \to \infty} \dfrac{7x}{x-4}$ exists directly from the definition.

3. Prove that $\lim\limits_{x \to 1} (3 - 2x)$ exists directly from the definition.

4. Prove that $\lim\limits_{x \to 3} 4x^2$ exists directly from the definition.