

### Practice Problems

1. Find  $\lim_{x \rightarrow \infty} \frac{2x^3 + x^2 - 5}{5x^3 - 7x^2 + 1}$  **Divide all terms by  $x^3$ . The limit is .4 or  $\frac{2}{5}$ .**

2. Find  $\lim_{x \rightarrow 0} \frac{3x^8 - \frac{1}{2}x^4 + x^3}{x^5 - 4x^3 + 10x^2}$  **Divide all terms by  $x^2$ . The limit is 0.**

3. Find  $\lim_{x \rightarrow 6} \frac{\sqrt{x^2 - 20} - 4}{x - 6}$  **Multiply by the conjugate. The limit is 12.**