

## Limits at Infinity- HW Problems

Evaluate the following limits:

1. 
$$\lim_{x \rightarrow \infty} \frac{2x+1}{3x^2-x+2}$$

2. 
$$\lim_{x \rightarrow -\infty} \frac{3x^3-x^2+1}{2x^2+4}$$

3. 
$$\lim_{x \rightarrow \infty} \frac{2x^3-x-1}{5x^3+x^2}$$

4. 
$$\lim_{x \rightarrow \infty} \frac{5-\cos(x^2)}{x^2}$$

5. 
$$\lim_{x \rightarrow -\infty} (-2x^4 - x + 4)$$

6. 
$$\lim_{x \rightarrow \infty} \frac{2x^2+x-1}{\sqrt{2+x^4}}$$

7. 
$$\lim_{x \rightarrow -\infty} \frac{x^3+3}{2x^3+x-1}$$

8. 
$$\lim_{x \rightarrow -\infty} \frac{\sqrt{x^2+1}-x^3}{x+x^3}$$