

MATH 2B/5B Prep: Limits at Infinity

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

2. Evaluate $\lim_{x \rightarrow \infty} \frac{x(x+1)(2x+1)}{6x^3}$.

3. Find the limit $\lim_{x \rightarrow \infty} \frac{\sin(x)}{\sqrt{x}}$. Hint: Consider the Squeeze Theorem.

4. Evaluate $\lim_{x \rightarrow \infty} \frac{x}{e^x}$.