

# Limits as $x$ approaches $\pm \infty$

$$1) \lim_{x \rightarrow \infty} x$$

$$2) \lim_{x \rightarrow \infty} \frac{1}{x}$$

$$3) \lim_{x \rightarrow \infty} \frac{x^2}{x}$$

$$4) \lim_{x \rightarrow \infty} \frac{x}{x^2}$$

$$5) \lim_{x \rightarrow \infty} \frac{6x^2 - 4x}{x^2 - 3}$$

$$6) \lim_{x \rightarrow \infty} \frac{x^3 + 7x}{4x^3 - 5}$$

$$7) \lim_{x \rightarrow \infty} \frac{3x + 1}{5 - 2x}$$

$$8) \lim_{x \rightarrow -\infty} \frac{2x^2}{x^2 - 1}$$

$$9) \lim_{x \rightarrow \infty} \frac{x - 2}{x^2 + 6x}$$

30.  
22, 21, 25, 26, 28  
43, 44, 45  
S, F  
bei d  
MH

$$10) \lim_{x \rightarrow -\infty} 5x^3 - 2x + 1$$

$$11) \lim_{x \rightarrow \infty} \frac{\sqrt{2x^2}}{x}$$

$$12) \lim_{x \rightarrow -\infty} \frac{\sqrt[3]{4x^3}}{x}$$

$$13) \lim_{x \rightarrow \infty} \frac{x^2}{\sqrt[3]{27x^5}}$$