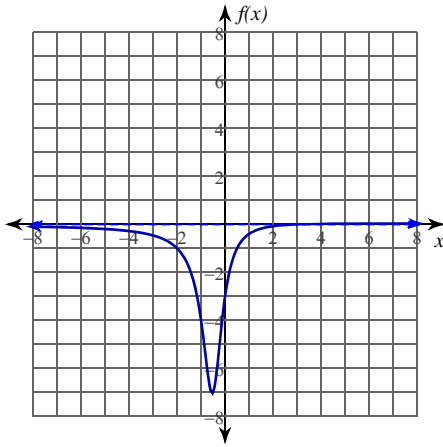


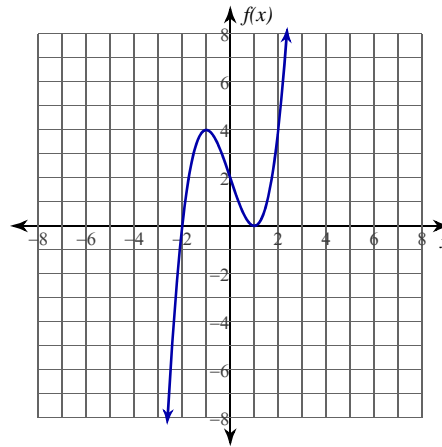
## Evaluating Limits

Evaluate each limit.

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



2)  $\lim_{x \rightarrow -\infty} (x^3 - 3x + 2)$



3)  $\lim_{x \rightarrow \infty} \frac{x}{x+3}$

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

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

6)  $\lim_{x \rightarrow \infty} (x^5 - 3x^3 + 3x - 1)$

7)  $\lim_{x \rightarrow \infty} (x^4 + x^3 - 2x^2 - 1)$

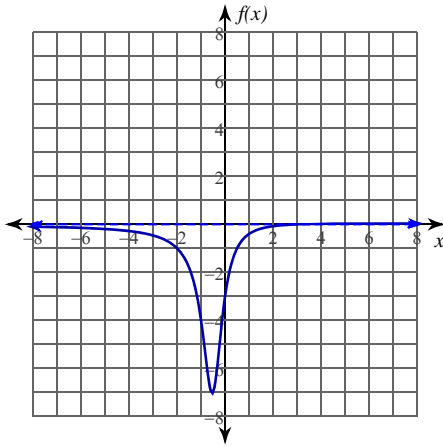
8)  $\lim_{x \rightarrow \infty} \frac{-x+2}{x^2+x+1}$

**Critical thinking question:**9) Give an example of a limit that goes to 4 as  $x$  goes to  $\infty$ .

## Evaluating Limits

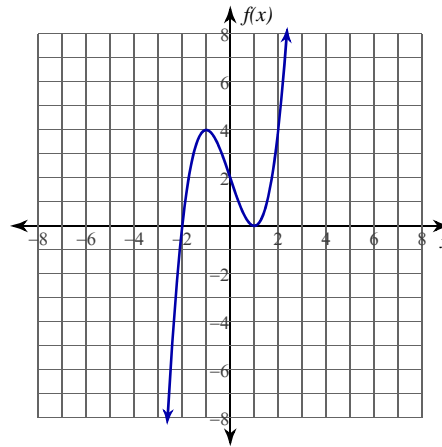
Evaluate each limit.

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



0

2)  $\lim_{x \rightarrow -\infty} (x^3 - 3x + 2)$

 $-\infty$ 

3)  $\lim_{x \rightarrow \infty} \frac{x}{x+3}$

1

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

 $\infty$ 

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

 $\infty$ 

6)  $\lim_{x \rightarrow \infty} (x^5 - 3x^3 + 3x - 1)$

 $\infty$ 

7)  $\lim_{x \rightarrow \infty} (x^4 + x^3 - 2x^2 - 1)$

 $\infty$ 

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

0

Critical thinking question:

9) Give an example of a limit that goes to 4 as  $x$  goes to  $\infty$ .Many answers. Ex:  $\lim_{x \rightarrow \infty} \frac{4x}{x+1}$