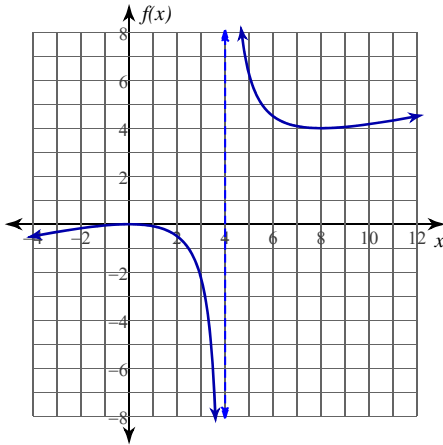


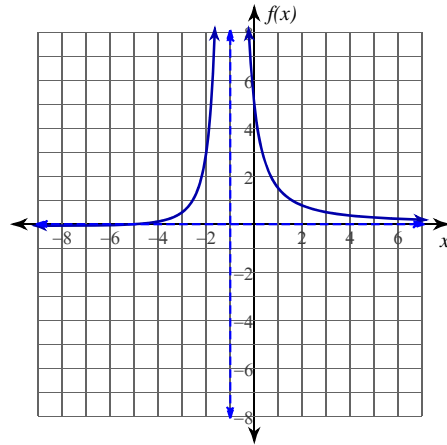
Evaluating Limits

Evaluate each limit.

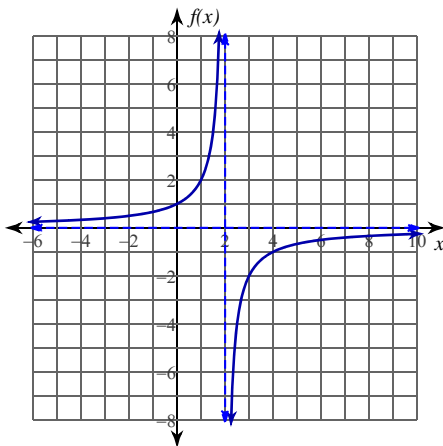
1) $\lim_{x \rightarrow 4} \frac{x^2}{4x - 16}$



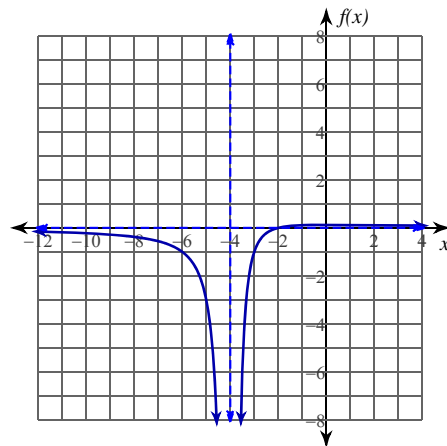
2) $\lim_{x \rightarrow -1} \frac{x + 5}{x^2 + 2x + 1}$



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



4) $\lim_{x \rightarrow -4^+} \frac{x + 2}{x^2 + 8x + 16}$



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

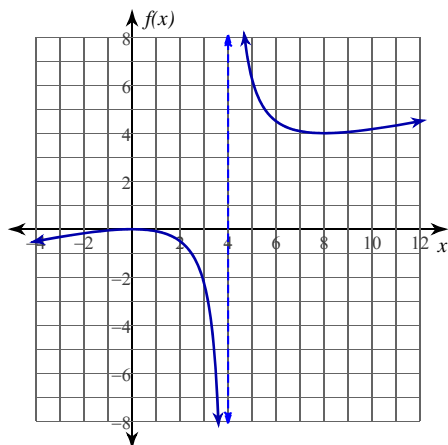
6) $\lim_{x \rightarrow 5} \frac{x - 2}{x^2 - 10x + 25}$

Critical thinking question:7) Give an example of a right-sided limit that goes to ∞ as x goes to 2.

Evaluating Limits

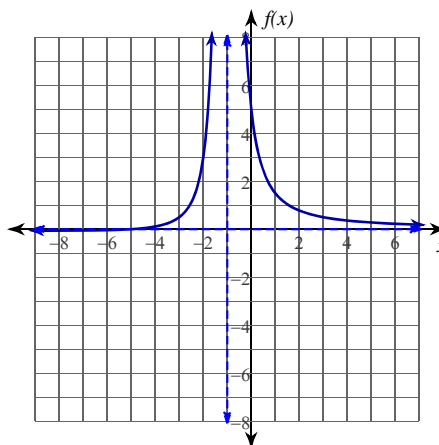
Evaluate each limit.

1) $\lim_{x \rightarrow 4} \frac{x^2}{4x - 16}$

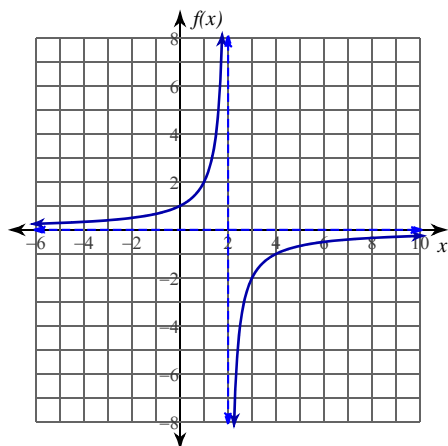


Does not exist.

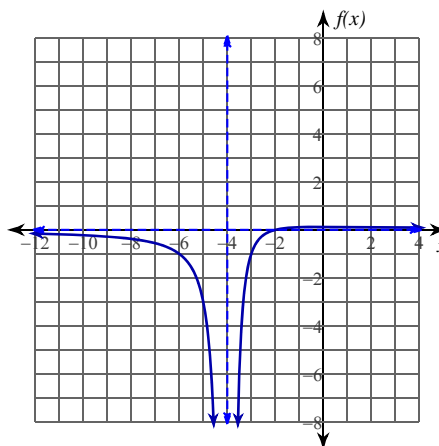
2) $\lim_{x \rightarrow -1} \frac{x + 5}{x^2 + 2x + 1}$

 ∞

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

 ∞

4) $\lim_{x \rightarrow -4^+} \frac{x + 2}{x^2 + 8x + 16}$

 $-\infty$

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

Does not exist.

6) $\lim_{x \rightarrow 5} \frac{x - 2}{x^2 - 10x + 25}$

 ∞

Critical thinking question:

7) Give an example of a right-sided limit that goes to ∞ as x goes to 2.Many answers. Ex: $\lim_{x \rightarrow 2^+} \frac{1}{x - 2}$