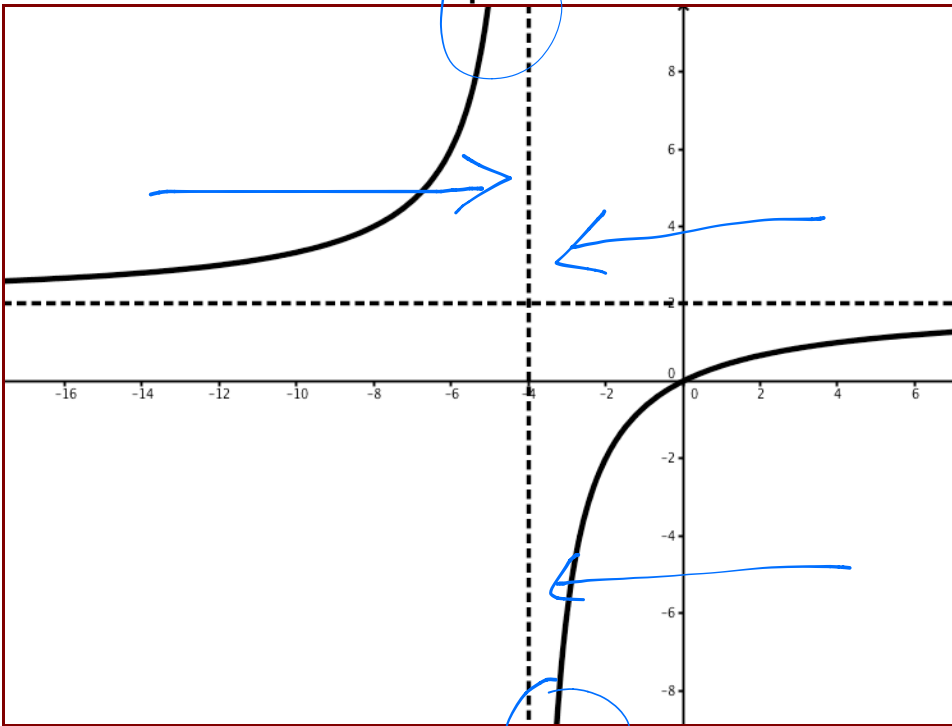


Graph #1



Holes: None

Vertical Asymptote:

$$x = -4$$

Domain:

$$\{x \mid x \neq -4\}$$

End Behavior Asymptote:

$$y = 2$$

x-intercept(s):

$$(0, 0)$$

y-intercept:

$$(0, 0)$$

Limits:

$$\lim_{x \rightarrow -\infty} f(x) = 2$$

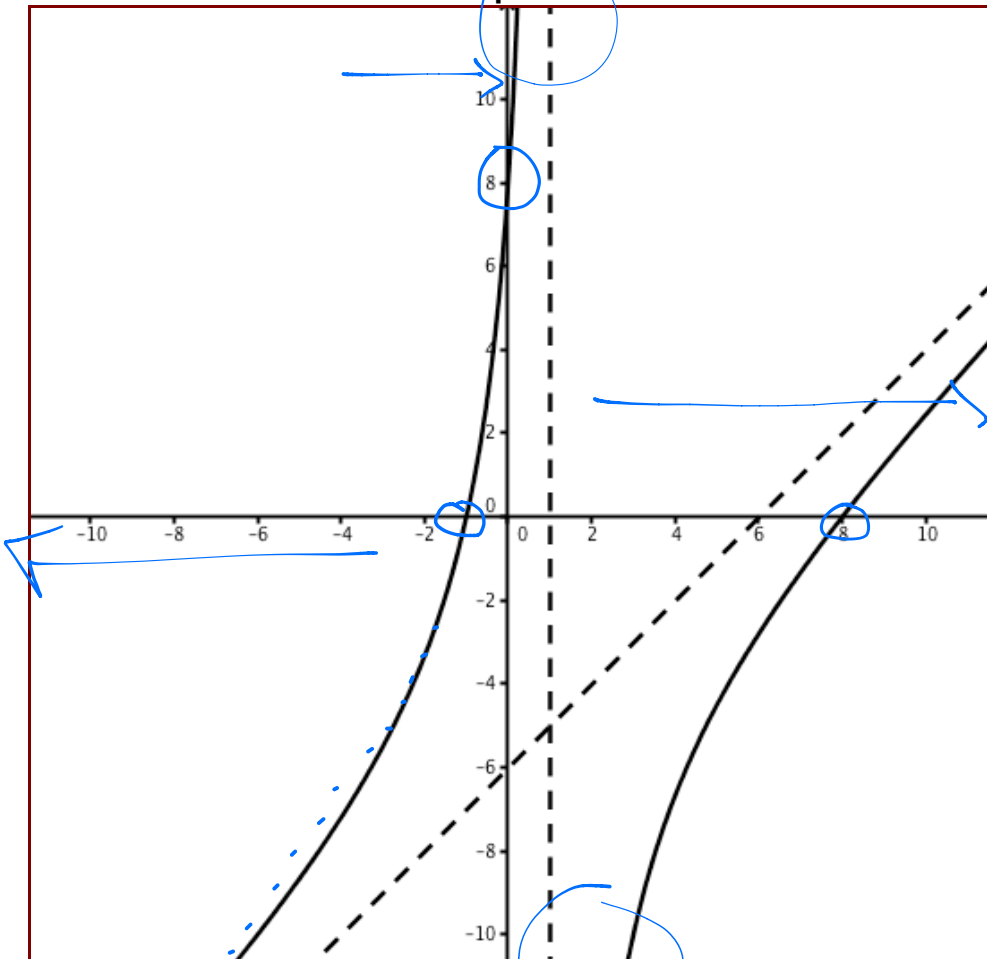
$$\lim_{x \rightarrow +\infty} f(x) = 2$$

left  
right

$$\lim_{x \rightarrow -4^-} f(x) = +\infty$$

$$\lim_{x \rightarrow -4^+} f(x) = -\infty$$

Graph #2



Holes: None

Vertical Asymptote:

$$x = 1$$

Domain:

$$\{x \mid x \neq 1\}$$

End Behavior Asymptote:

$$y = x - 6$$

x-intercept(s):

$$(-1, 0) \quad (8, 0)$$

y-intercept:

$$(0, 8)$$

Limits:

$$\lim_{x \rightarrow -\infty} f(x) = -\infty$$

$$\lim_{x \rightarrow +\infty} f(x) = +\infty$$

$$\lim_{x \rightarrow 1^-} f(x) = +\infty$$

$$\lim_{x \rightarrow 1^+} f(x) = -\infty$$

Holes: @  $x = -2$

Vertical Asymptote:  $x = -5$

Domain:  $\{x \mid x \neq -5, -2\}$

End Behavior Asymptote:  $y = 1$

x-intercept(s):  $(1, 0)$

y-intercept:  $(0, -2)$

Limits:

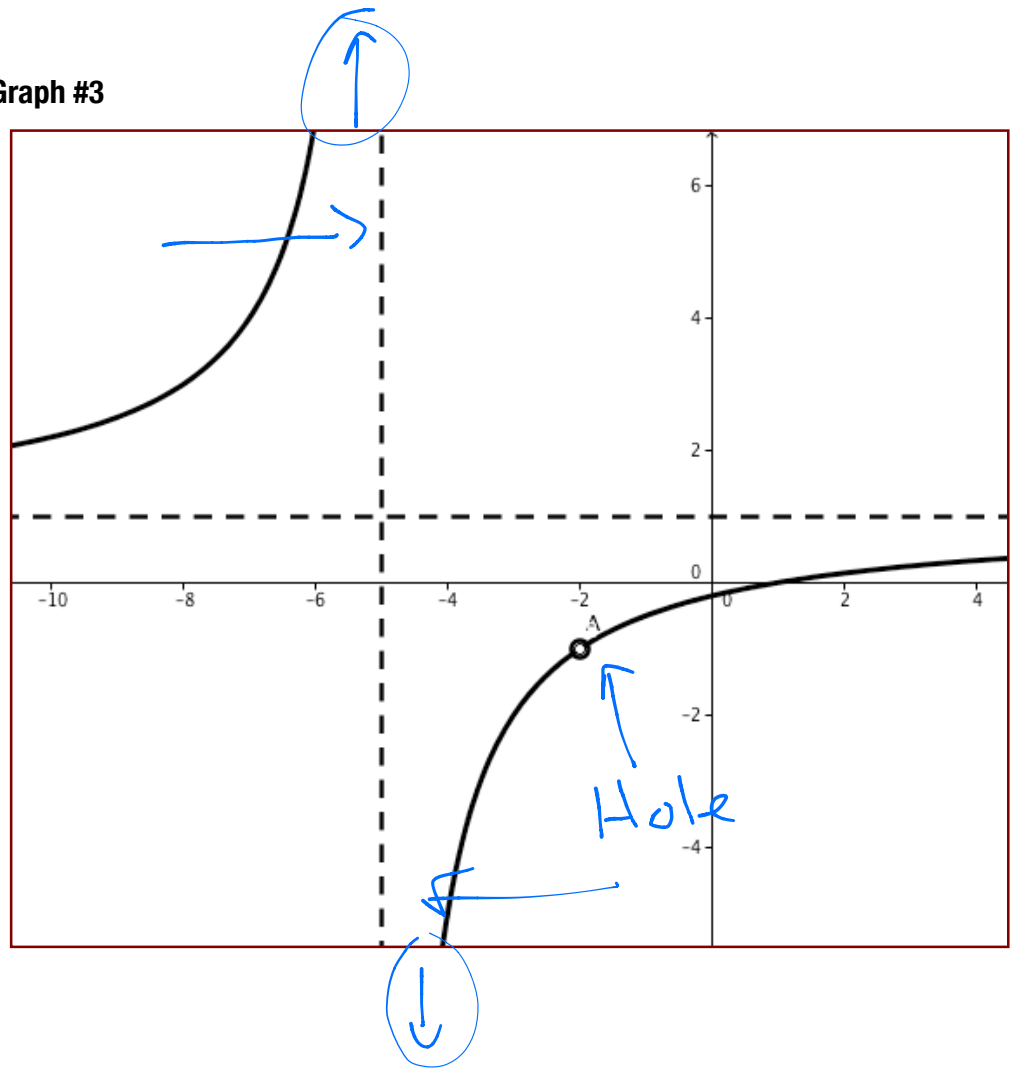
$$\lim_{x \rightarrow -\infty} f(x) = 1$$

$$\lim_{x \rightarrow +\infty} f(x) = 1$$

$$\lim_{x \rightarrow -5^-} f(x) = +\infty$$

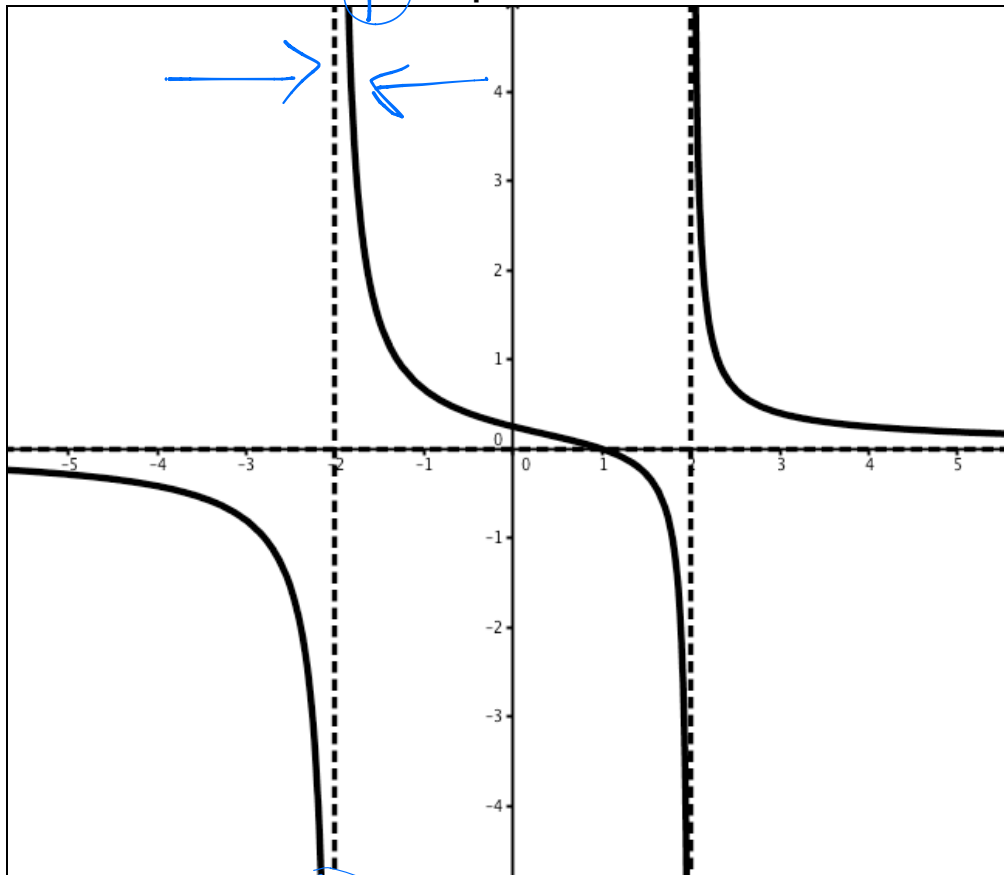
$$\lim_{x \rightarrow -5^+} f(x) = -\infty$$

Graph #3





Graph #4



Holes: NONE

Vertical Asymptote:

$$x = -2 \quad x = 2$$

Domain:

$$\{x \mid x \neq -2, 2\}$$

End Behavior Asymptote:

$$y = 0$$

x-intercept(s):

$$(1, 0)$$

y-intercept:

$$(0, 2)$$

Limits:

$$\lim_{x \rightarrow -\infty} f(x) = 0$$

$$\lim_{x \rightarrow +\infty} f(x) = 0$$

$$\lim_{x \rightarrow -2^-} f(x) = -\infty$$

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

$$\lim_{x \rightarrow 2^-} f(x) = -\infty$$

$$\lim_{x \rightarrow 2^+} f(x) = +\infty$$