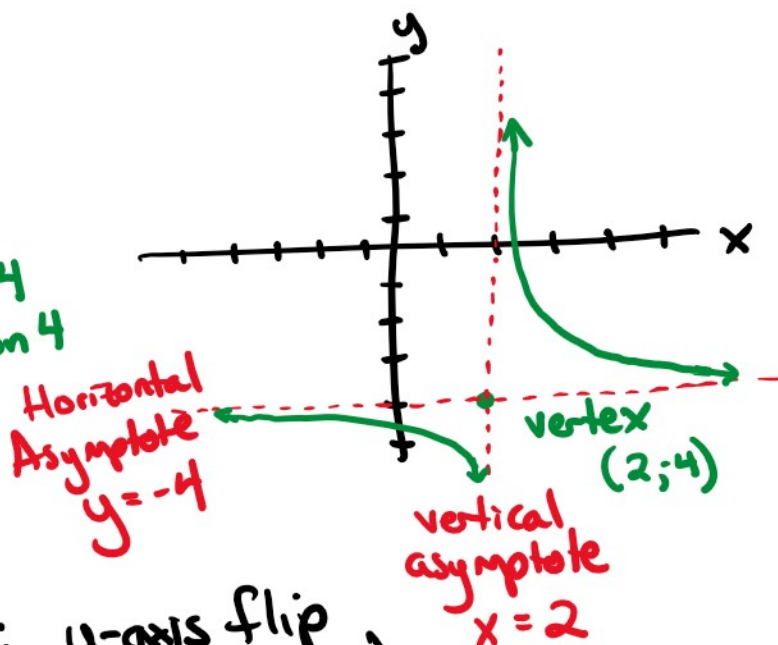


3.5 Notes

Wednesday, June 19, 2019 1:21 PM

$$f(x) = \frac{1}{x-2} - 4$$

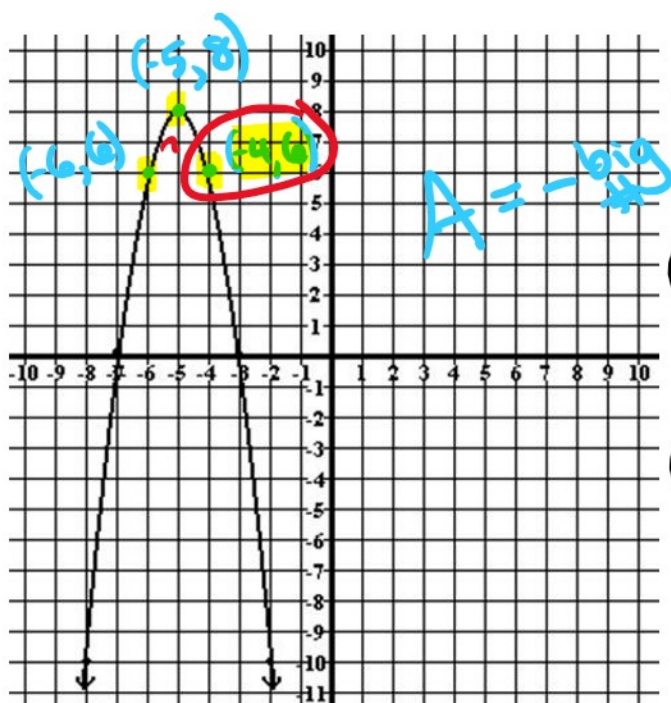
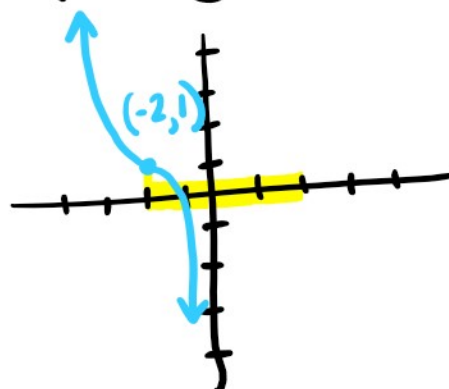
$A=1 \rightarrow$
 $B=-2$ Right 2
 $C=-4$ Down 4



Negative x-variable: y-axis flip (left/right)

$$f(x) = 1(-x-2)^3 + 1$$

$A=1$
 negative x-variable
 $B=-2$ Right 2
 $C=1$ up 1



$$f(x) = -2(x+5)^2 + 8$$

① Identify Parent Function (shape)
 x^2 x^3 $\sqrt{x}$ $|x|$ $\frac{1}{x}$

② Write down the general equation
 $f(x) = A(x+B)^2 + C$

③ Identify vertex and use the coordinates to find B and C

$$(-5, 8)$$

$$-B = -5 \quad C = 8$$

$$B = 5$$

$$f(x) = \frac{-2}{1} \left(x + \frac{5}{8} \right)^2 + \frac{8}{c}$$

$$-b \pm \sqrt{b^2 - 4ac}$$

$$B = 5$$

④ Write your solution as:

$$y = A(x+5)^2 + 8$$

plug in a
point
 $(-4, 6)$

$$6 = A(-4+5)^2 + 8$$

solve for A-value $\rightarrow 6 = A(1) + 8$

$$6 = A + 8$$

$$\begin{array}{r} 6 \\ -8 \\ \hline -2 = A \end{array}$$

$$y = mx + b$$

$$y = 4x + b$$

$$8 = 4(-1) + b$$