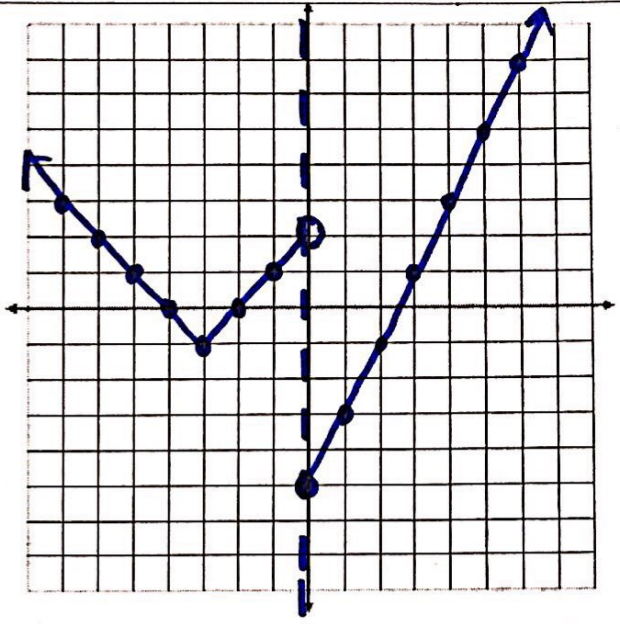
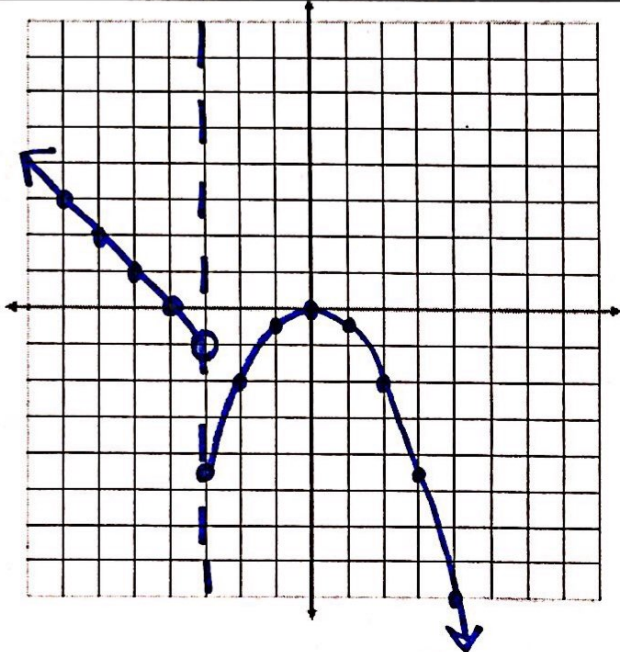


Graphing Piecewise Functions Day 2

Directions: Graph each function, then give the domain and range.

<p>1. $f(x) = \begin{cases} x+3 -1, & x < 0 \\ 2x-5, & x \geq 0 \end{cases}$ (0, 2) (0, -5)</p>	
<p>Domain: $(-\infty, \infty)$</p>	
<p>Range: $[-5, \infty)$</p>	
<p>2. $f(x) = \begin{cases} -4-x, & x < -3 \\ -\frac{1}{2}x^2, & x \geq -3 \end{cases}$ (-3, -1) (-3, -4.5)</p>	
<p>Domain: $(-\infty, \infty)$</p>	
<p>Range: $(-\infty, \infty)$</p>	

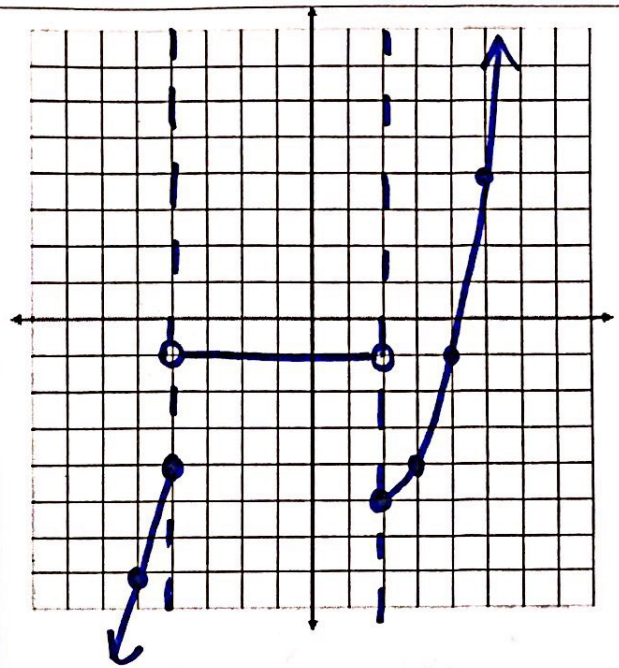
$$3. f(x) = \begin{cases} 3x+8, & x \leq -4 & (-4, -4) \\ -1, & -4 < x < 2 & (-4, -1) \quad (2, -1) \\ (x-2)^2 - 5, & x \geq 2 & (2, -5) \end{cases}$$

Domain:

$$(-\infty, \infty)$$

Range:

$$(-\infty, \infty)$$



$$4. f(x) = \begin{cases} 7, & x < -1 & (-1, 7) \\ x^3 - 1, & -1 \leq x < 2 & (-1, -2) \quad (2, 7) \\ -\sqrt{2x} + 1, & x \geq 2 & (2, -1) \end{cases}$$

Domain:

$$(-\infty, \infty)$$

Range:

$$(-\infty, 7]$$

