

4.6 Notes Day 2

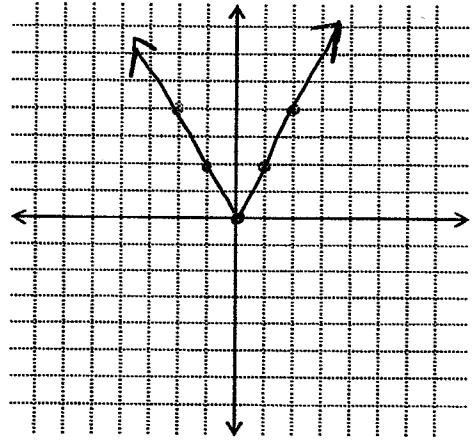
Vertical stretch/
shrink

WS 4.6 Graphing Absolute Value Functions - Day 2

1. $f(x) = 2|x|$

Vertex: $(0, 0)$

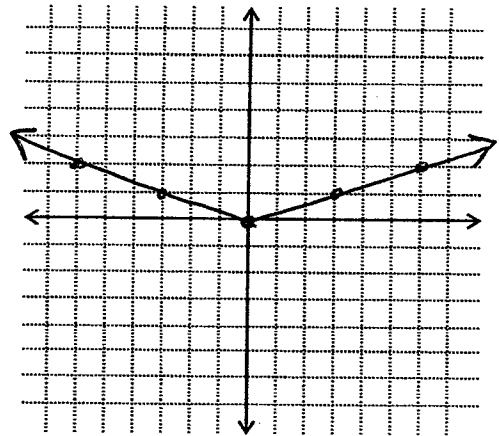
x	-2	-1	0	1	2
y	4	2	0	2	4

Slope of the ray to the left: 2 Slope of the ray to the right: 2 D: $(-\infty, \infty)$ R: $[0, \infty)$ 

2. $f(x) = \frac{1}{3}|x|$

Vertex: $(0, 0)$

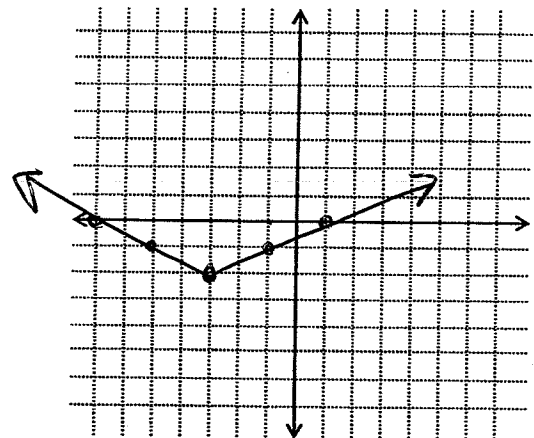
x	-6	-3	0	3	6
y	2	1	0	1	2

Slope of the ray to the left: $\frac{1}{3}$ Slope of the ray to the right: $\frac{1}{3}$ D: $(-\infty, \infty)$ R: $[0, \infty)$ 

3. $f(x) = \frac{1}{2}|x+3| - 2$

Vertex: $(-3, -2)$

x			-3		
y			-2		

Slope of the ray to the left: $\frac{1}{2}$ Slope of the ray to the right: $\frac{1}{2}$ D: $(-\infty, \infty)$ R: $[-2, \infty)$ 

↪ reflection over the x-axis

4. $f(x) = -|x|$

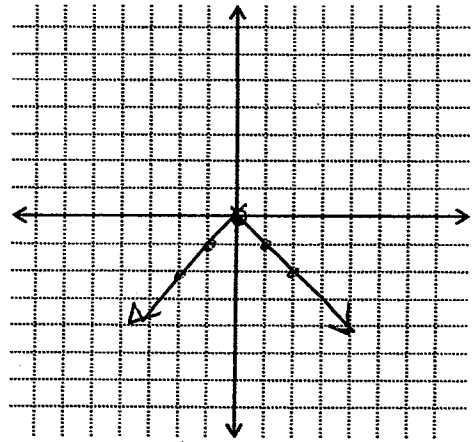
Vertex: (0, 0)

x	-2	-1	0	1	2
y	-2	-1	0	-1	-2

Slope of the ray to the left: -1

Slope of the ray to the right: -1

D: $(-\infty, \infty)$ R: $(-\infty, 0]$



5. $f(x) = -2|x+1| - 3$

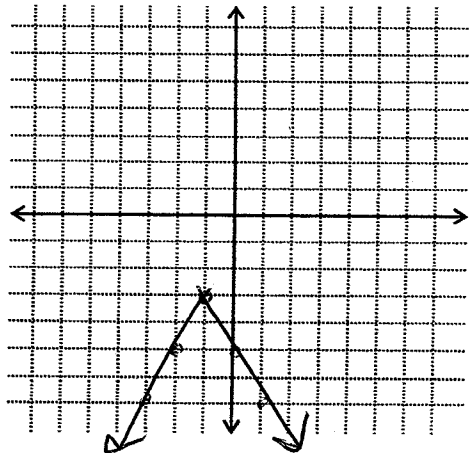
Vertex: (-1, -3)

x			-1		
y			-3		

Slope of the ray to the left: -2

Slope of the ray to the right: -2

D: $(-\infty, \infty)$ R: $(-\infty, -3]$



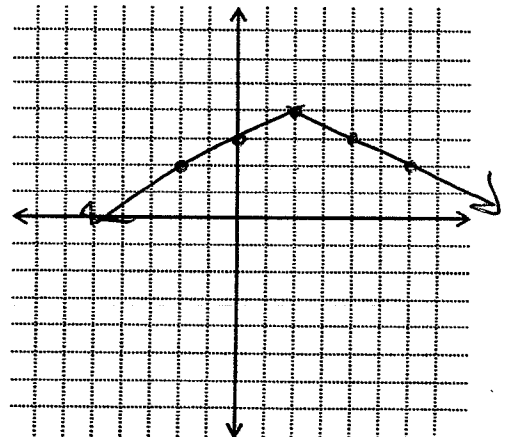
6. $f(x) = -\frac{1}{2}|x-2| + 4$

Vertex: (2, 4)

x					
y					

Slope of the ray to the left: $-\frac{1}{2}$

Slope of the ray to the right: $-\frac{1}{2}$



D: $(-\infty, \infty)$ R: $(-\infty, 4]$