Algebra 2 Hwk #7 Sec 2-5 Name: Answers

Describe all the transformation of $y = |x|$ each equation represents.

1. $y = -3|x+1|-7$
   - opens down
   - 3 times taller
   - moved 1 left
   - moved 7 down

2. $y = 6|x-8|+2$
   - opens up
   - 6 times taller
   - moved 8 right
   - moved 2 up

Write the equation of each transformation of $y = |x|$

3. Translated 16 units left, 7 units up, twice as tall, opens down.

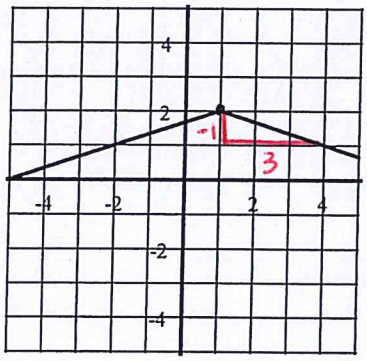
EQ: $y = -2|x+16|+7$

4. Translated 8 units down, one-third as tall, and opens up.

EQ: $y = \frac{1}{3}|x|-8$

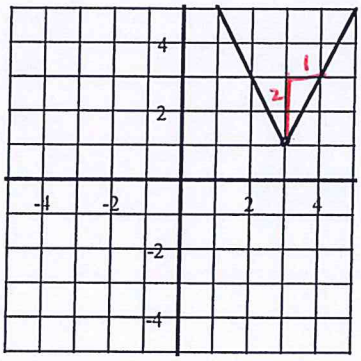
Write the equation of each absolute value function.

5. EQ $y = -\frac{1}{3}|x-1|+2$



Vertex (1, 2)

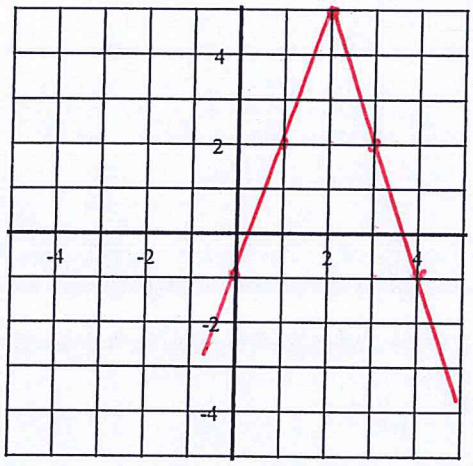
6. EQ $y = 2|x-3|+1$



Vertex (3, 1)

Graph each absolute value function using at least five points.

7. $y = -3|x-2|+5$
   - Vertex (2, 5)
   - opens down
   - 3 times taller



8. $y = \frac{1}{2}|x+1|-3$
   - Vertex (-1, -3)
   - 1/2 as tall
   - opens up