ALGEBRA II HONORS
Graphing Absolute Value Equations

Name: _____   Period:_____   Date:_____
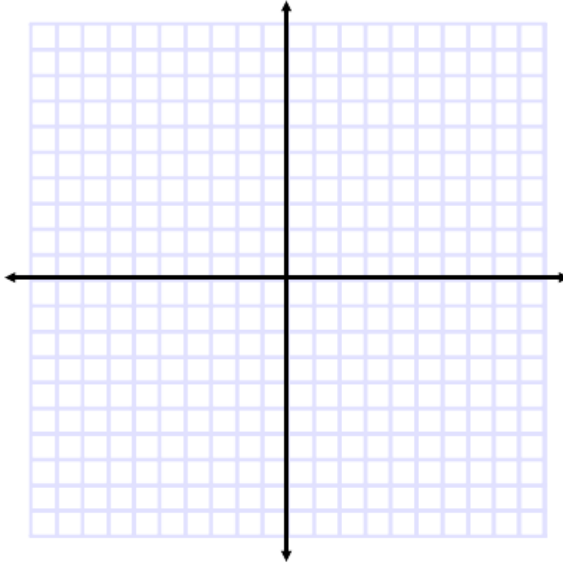
Enter the following equation into y_1 on a graphing calculator $y = |x|$. Make this graph bold.
Now enter each of the following equations into y_2 one at a time and make observations
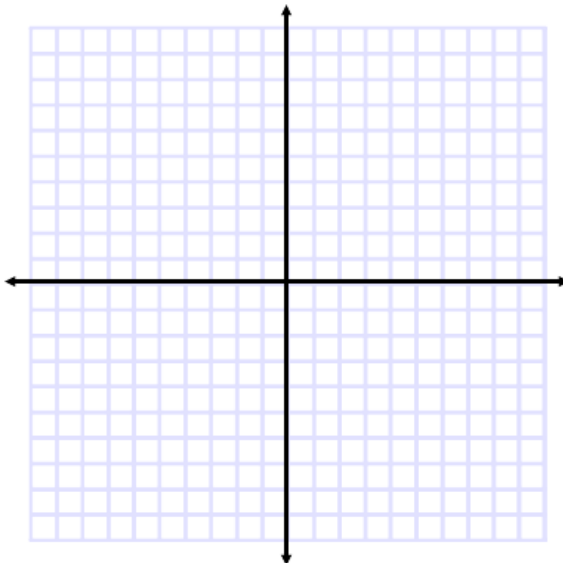regarding how each graph compares to the original y_1 equation.
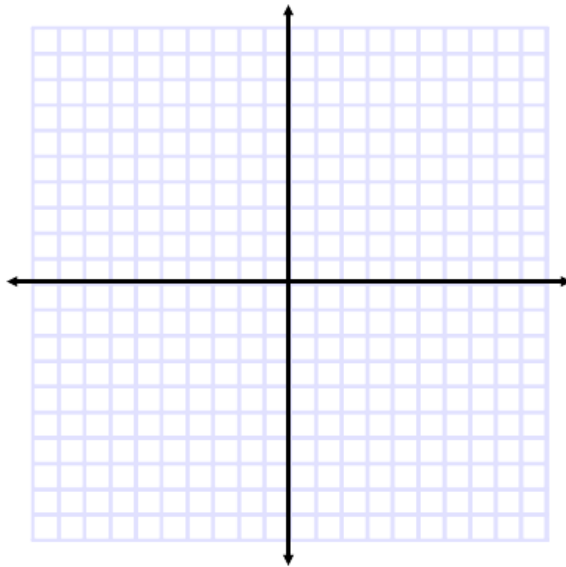
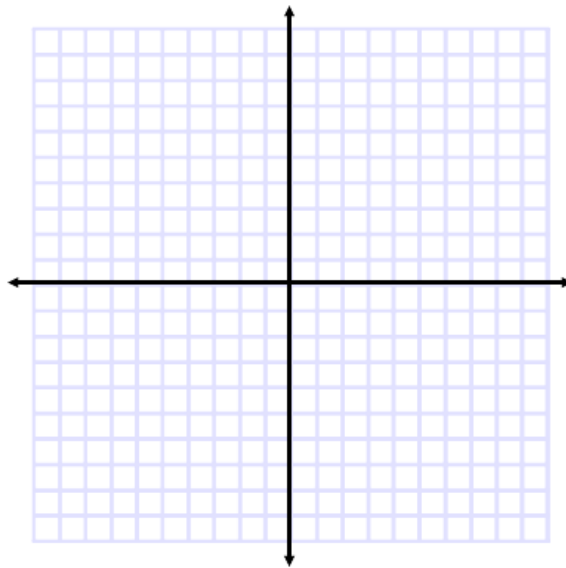Graph _____   Observations _____

1. $y = |x|$

x	y

_____

_____

2. $y = -|x|$

x	y

_____

_____

3. $y = |x + 5|$

x	y

4. $y = |x| + 3$

x	y

5. $y = |x - 5|$

x	y
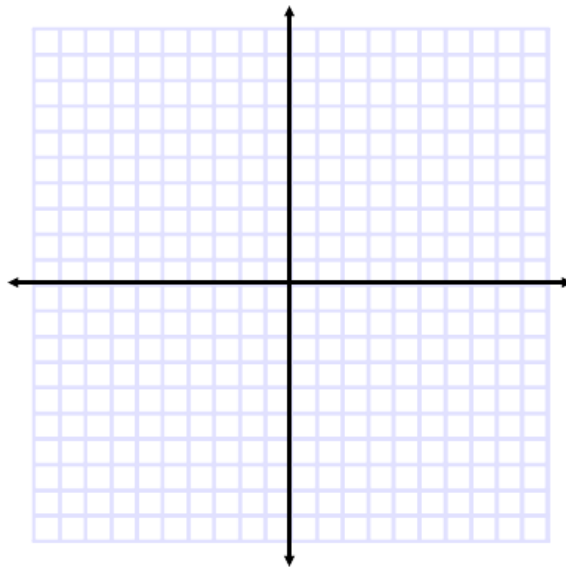
6. $y = |x + 5| - 3$

x	y
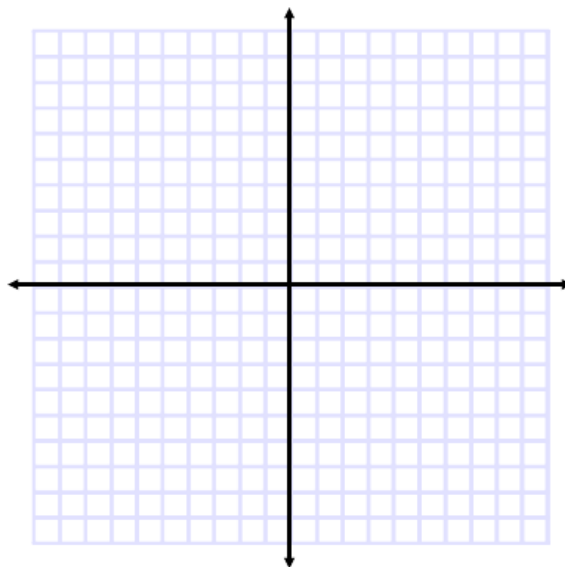
7. $y = 2|x|$

x	y
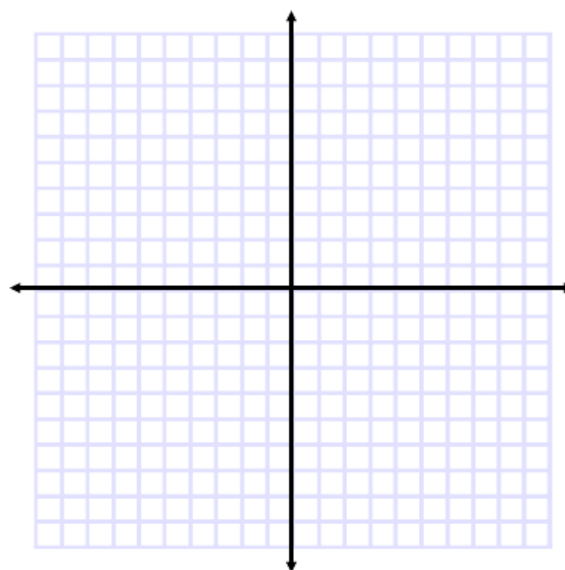
8. $y = \frac{1}{2}|x|$

x	y
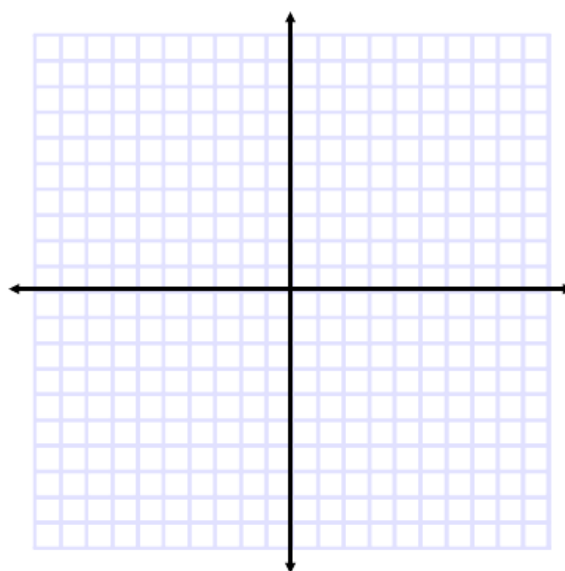
9. $y = -|x| + 2$

x	y
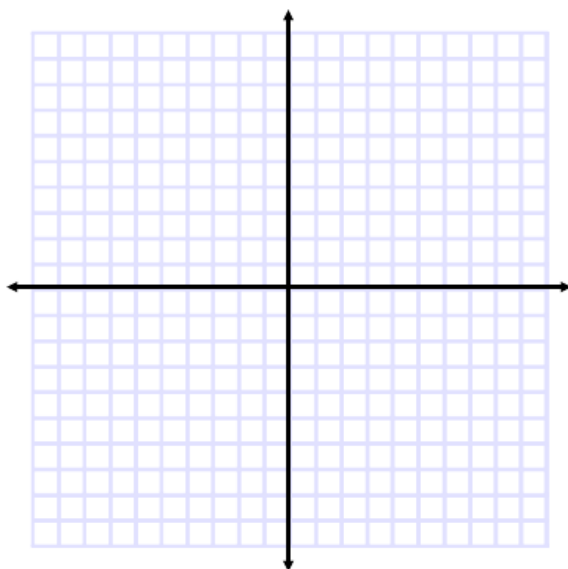
Use the observations that you made above to explain what each of the following graphs look like without using a graphing calculator.

1. $y = -|x - 4|$

2. $y = |x - 6| + 2$

3. $y = 5|x + 2|$