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**5/28/14**

# **Mathematical Mosaic**

1. Graph the equations listed in section A using a pencil. Make sure to extend your lines all the way to the edge of your graph paper (using a ruler) and that your lines are straight and neat.

$$y = x$$

$$y = -x$$

$$y = 5x + 2$$

$$y = -5x + 2$$

$$y = \frac{5}{8}x - 2$$

$$y = -\frac{5}{8}x - 2$$

$$y = \frac{1}{5}x + 1$$

$$y = -\frac{1}{5}x + 1$$

$$y = \frac{2}{3}x + 3$$

$$y = \frac{2}{3}x - 3$$

$$y = -\frac{2}{3}x + 5$$

$$y = -\frac{2}{3}x - 5$$

$$y = |x| + 3$$

$$y = -|x| - 3$$

$$y = 13$$

$$y = -13$$

$$x = 13$$

$$x = -13$$

**“Section A”**

2. Plot the ordered pairs from section B in their individual groups, then connect them in order from top (ordered pairs) to bottom. For example: Graph (0,2), (5,6), and (10,10), then connect (0,2) to (5,6), then connect (5,6) to (10,10). Then you would plot and connect group 2 separately in the way we just completed group number 1.

Group 1	Group 2	Group 3	Group 4	
(0,2)	(0,2)	(0,-2)	(0,-2)	
(5,6)	(5,-1)	(-5,2)	(-5,-6)	<b>“Section B”</b>
(10,10)	(10,-4)	(-10,6)	(-10,-10)	

3. Cut your paper on the lines  $y= 13$ ,  $y= -13$ ,  $x= 13$ , and  $x= -13$ .
4. Color your mosaic using colored pencils however you want. Just try to make it look as colorful and beautiful as possible.
5. Glue your creation onto a piece of construction paper.
6. You are done! You may now stand back and marvel at you magnificent mathematical mosaic.