

CREATE YOUR OWN STAINED GLASS WINDOW PROJECT

DUE: January 6, 2016

In this project you will be assessed on your ability to graph linear equations by creating your own stained glass window.

Follow the steps below to create your own stained glass window.

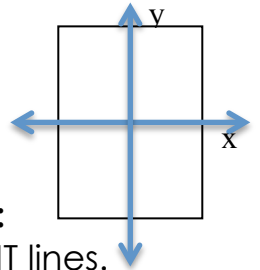
A. Complete the Work Page (page 2)

1. Determine the slope and y-intercept for the 8 given equations.
2. Circle the type of line the equation will produce. (diagonal, horizontal, or vertical)

You will be turning in this sheet as your work page.

B. ON GRAPH PAPER:

1. Draw an x-axis and y-axis that extend to the ends of the page of graph paper
2. Use the slope ($\frac{\text{rise}}{\text{run}}$) and y-intercept to correctly graph EACH of the linear equations on the coordinate plane.
3. **When you graph these linear equations please make sure that:**
 - i. You use a ruler to connect the points and make STRAIGHT lines.
 - ii. **Your lines extend all of the way to the edges of your graph paper.**
 - iii. Write the equation along the line that goes with it.



C. Go back and use your ruler to trace each of your lines using a black marker.

D. Color in the pieces/sections you created when you graphed the linear equations. The only rules are...

1. You cannot create a new section within a section.
2. You cannot color a section in black.
3. **You must use markers** to color in your stained glass window. *When you use marker, you will be able to hold your graph up to the window, and it will look like a stained glass window. You will not get the same effect with crayon or color pencil.*

- You will be turning in the work page and graph paper on the due date.
 - Look at Page 3 for the rubric on you will be graded!

Name: _____

Class: _____

My Stained Glass Window Project Work Page

1) $y = -x$

m =

b =

diagonal line, horizontal line, or vertical line

2) $y = 2x + 4$

m =

b =

diagonal line, horizontal line, or vertical line

3) $y = \frac{1}{2}x - 3$

m =

b =

diagonal line, horizontal line, or vertical line

4) $y = x - 18$

m =

b =

diagonal line, horizontal line, or vertical line

5) $y = -4x + 19$

m =

b =

diagonal line, horizontal line, or vertical line

6) $y = 15$

m =

b =

diagonal line, horizontal line, or vertical line

7) $x = -1$

m =

b =

diagonal line, horizontal line, or vertical line

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

m =

b =

diagonal line, horizontal line, or vertical line

My Stained Glass Window Project Rubric

The following rubric will be used to grade your project. It will be out of 100 points and will count as an assessment grade.

Category	Points
Work Page Completion <ul style="list-style-type: none">Each completed box will be worth 5 points.<ul style="list-style-type: none">- 2 points for writing down the correct slope- 2 points for writing down the correct y-intercept- 1 point for circling the correct line type	/40
Graphs of the Lines of Each Equation <ul style="list-style-type: none">You will receive 6 points for each correctly graphed linear equation.<ul style="list-style-type: none">-3 points for plotting the y-intercept correctly-3 points for using the slope to plot more points correctlyYour lines must extent to the edges of the graph paper!	/48
Overall Look: Presentation & Neatness <ul style="list-style-type: none">You will receive 4 points for using markers.You will receive 4 points for neatness.You will receive 4 points for overall presentation and following directions.	/12

Total: _____/100