

# STAINED GLASS INSTRUCTIONS

## □ **Setting Up the Graph**

Create the x and y axes using a pencil and ruler. The origin should be right in the center of the grid. There should be 19 boxes above and below the x-axis and 15 boxes to the left and right of the y-axis. Label each axis and scale the axes by 1s, but only list multiples of 5 along each axis.

## □ **Graphing the Lines**

- ✓ Choose an integer value on the y-axis, and place a small point.
- ✓ Choose another ordered pair somewhere up and to the right or down and to the left (for  $m > 0$ ) of the first point you drew, and place small point.
- ✓ Use the rise & run to place as many tiny ordered pairs as you can to help you prepare to draw the line.
- ✓ Using your ruler, draw a line through the points that extends from one side of the grid to the other.
- ✓ In the white margins at opposite ends of the line you drew, label this line as “#1”.
- ✓ Write the equation for the graph of this line in slope-intercept form on the Stained Glass Window Lines sheet.

□ Repeat the steps above (labeling each subsequent line with the next number in order) until you have at least 4 lines with a positive slope.

□ Next, create at least 4 lines in the same fashion, with a negative slope.

□ Next, create at least 2 lines that have a slope of 0. You don't have to convert these to standard form because slope-intercept form, and standard form of a horizontal line are the same.

□ Next, create at least 2 lines that have a slope that is undefined. You don't have to convert these to slope-intercept form because undefined lines can only be expressed in standard form.

## □ **Converting the Lines to Standard Form**

Using a piece of loose-leaf lined paper, convert the equation on your Stained Glass Window Lines page from slope-intercept form to standard form. Standard form should have integers for A, B, and C values, and A, B, and C values should have no common factors other than 1. In diagonal lines, A should be positive.

□ Once all your lines are drawn in pencil, you have the Stained Glass Window Lines sheet completely filled out, and you have shown all of your conversions on a piece of loose-leaf notebook paper, staple your Stained Glass Window Lines sheet on top of your loose-leaf notebook paper where you did your converting.

**Coloring**

- Begin by using a black colored pencil and a ruler to go over the x and y axes you drew in pencil.
- From there, choose a split complementary, triadic, or analogous color scheme. Be sure to color neatly, completely, and consistently.
- When you finish coloring, get a paper clip from me and include (in order):
  - ✓ Your grading rubric - filled out
  - ✓ Your stained glass graph page
  - ✓ Your Stained Glass Window Lines sheet that has the loose-leaf notebook paper where you did all your converting stapled to it.
- Turn in your packet to your class period's in-basket.

This checklist can now be recycled.