

Stained Glass Window

Name: _____

Date: _____

Period: _____

You will create your own **Stained Glass Window** using your knowledge of linear equations. When creating your stained glass window, **you must include:**

4 horizontal lines (cannot be grid borders)

4 vertical lines (cannot be grid borders)

4 lines with positive slope (cannot be parallel to each other)

4 lines with negative slope (cannot be parallel to each other)

1 **pair** of parallel lines (must be different from lines above)

1 **pair** of perpendicular lines

In addition to your personal line selection, you must also include the following:

The line parallel to $6y - 5x = -24$ that passes through the point $(0, 2)$

The line that passes through the points $(1, 3)$ and $(2, -4)$.

The line perpendicular to $2y - 14 = -3x$ that passes through the point $(-1, -3)$.

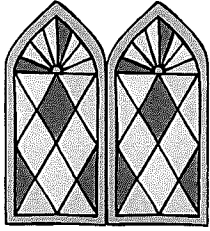
The line that has a slope of $-\frac{1}{2}$ and passes through the point $(-4, -2)$.

You will then graph all 24 lines on the accompanying coordinate grid. Neatly label each line with its corresponding equation.

When you are done graphing the equations, use markers or colored pencils to color each section and create your stained glass window. Adjoining sections cannot be the same color!

All equations must be recorded on the Equation Recording Sheet. You must show your work for the mandatory equations in the space provided on the Equation Recording Sheet.

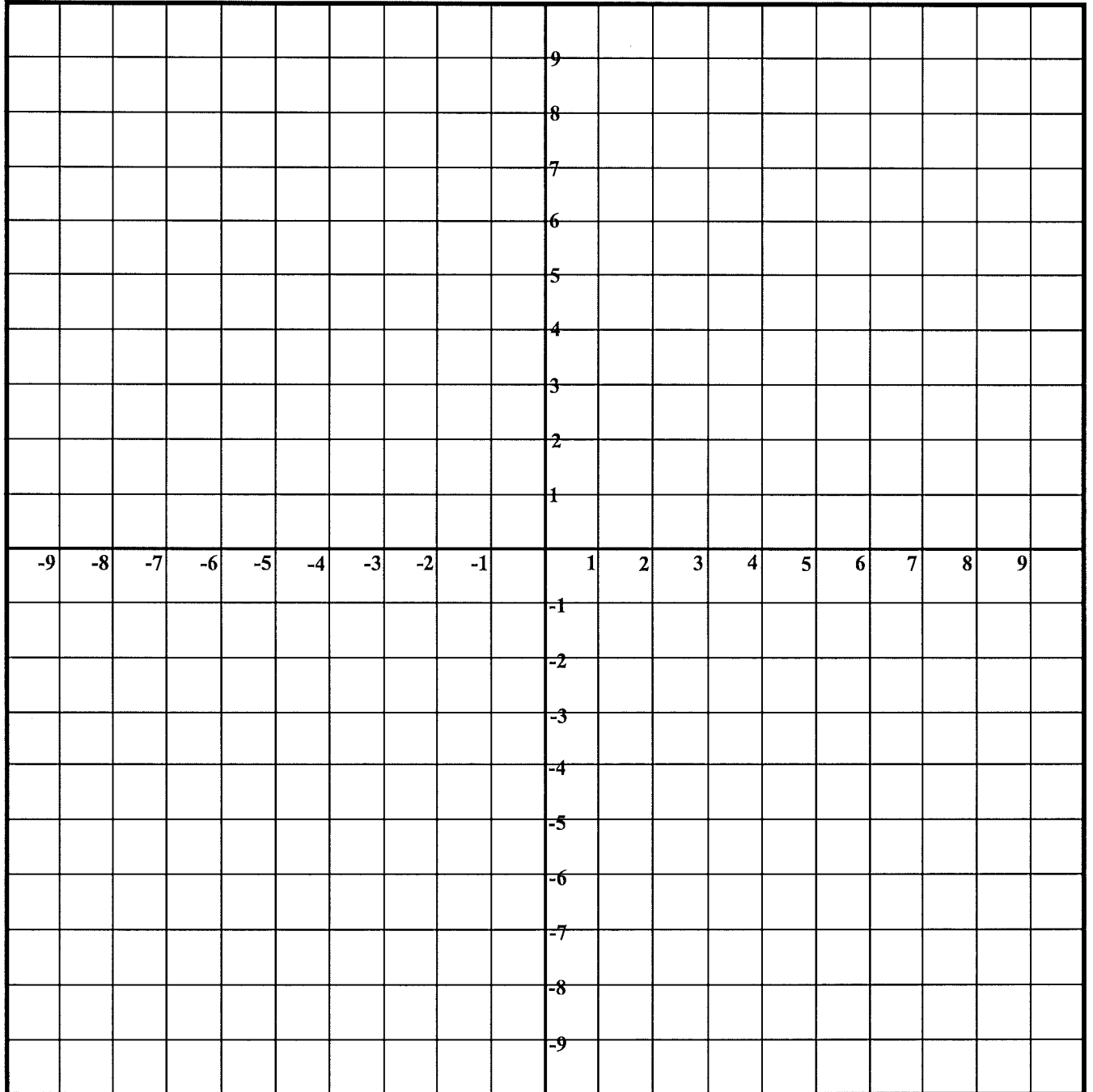
4 Horizontal Lines:	4 Vertical Lines:
4 Lines w/Positive Slope:	4 Lines w/Negative Slope:
1 Pair of Parallel Lines:	1 Pair of Perpendicular Lines:
The line parallel to $6y - 5x = -24$ that passes through the point $(0, 2)$	
The line that passes through the points $(1, 3)$ and $(2, -4)$	
The line perpendicular to $2y - 14 = -3x$ that passes through the point $(-1, -3)$	
The line that has a slope of $-\frac{1}{2}$ and passes through the point $(-4, -2)$	

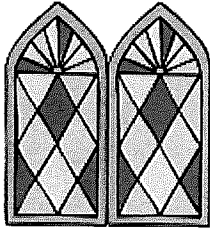


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Stained Glass Window Project





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Scoring Rubric – The Stained Glass Window Activity is worth 20 points. See below for point breakdown:

_____ 4 horizontal lines equations (1/2 point each = 2 points)

_____ 4 vertical line equations (1/2 point each = 2 points)

_____ 4 positive slope equations (1/2 point each = 2 points)

_____ 4 negative slope equations (1/2 point each = 2 points)

_____ 1 pair of parallel line equations (1/2 point each = 1 point)

_____ 1 pair of perpendicular line equations (1/2 point each = 1 point)

_____ 4 mandatory line equations including work and correct equation (1 point each = 4 points)

_____ Presentation (4 points)

- Ruler was used; lines are straight
- Each line is clearly and neatly labeled
- Lines extend to outer edge of coordinate grid
- Colored properly; adjoining sections cannot be the same color!

_____ Equation Recording Sheet is filled out with correct equations (2 points)

Final Score:

_____/ 20 points

****THIS RUBRIC MUST BE SUBMITTED WITH YOUR EQUATION RECORDING SHEET
AND YOUR STAINED GLASS WINDOW****