stained glass window project 2014

ALGEBRA 1

The purpose of this project is to use linear equations to design a stained glass window. You will include lines with zero, undefined, positive and negative slopes. The skills of graphing and writing linear equations will be used to create your stained glass window. For examples of previous students work, visit this website: http://goo.gl/MCxdlo .

Procedure:

1. Start with a grid piece of graph paper (attached) with the x and y axes in the center of the paper.
2. Create your stained glass window by drawing 5 horizontal lines, 5 vertical lines, 5 lines with positive slope, and 5 lines with negative slope.
3. Fill out the table and determine the equation (in slope-intercept form) for each line graphed on the tables paper.

   Example: My line goes through the points (0,-3), (1,2), and (2,7)

4. Make sure your lines extend all the way to the ends of your graph paper. **Lightly label each line with numbers corresponding to the numbers on your tables.**
5. Now go in and color **each** section. Be careful that the equations of the lines are still visible (go over them in a dark marker). Use colored pencils, markers, paint, glitter, colored paper, etc., to make your stained glass window unique and beautiful.
6. Mount your stained glass window on the colored piece of paper provided.
7. Attach your tables and equations to your final project.
8. BONUS: In addition to your 20 lines, use at least 5 quadratic equations. You must also write their equations (in standard form) on a separate sheet of paper and attach them to your final project.

HINTS:

- Make sure each of your lines has at least 3 pretty points and a whole number y-intercept.
- To find equations you can use STAT (especially of quadratics) once you have filled out the table.
- Clearly label each line. You should wait to color each section until you have filled out ALL tables and equations.

Due Dates:

Equations (in slope intercept form) & Draft: **Wednesday, May 21st** (Beginning of class)

Final Project (due at the end of class): **Friday, May 23rd**

Name _____ Period ____

ATTACH THIS SCORING GUIDE TO YOUR PROJECT

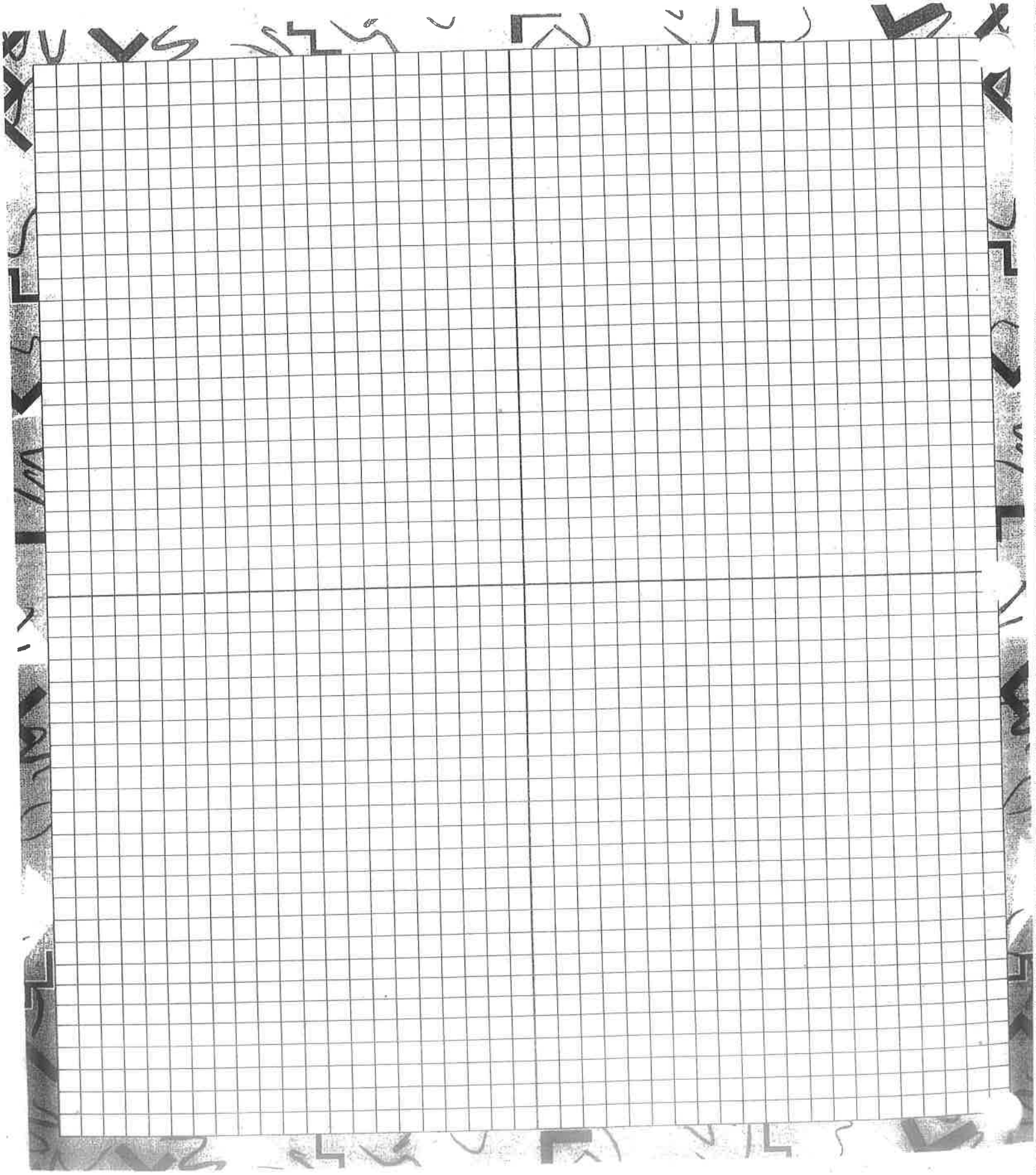
STAINED GLASS WINDOW PROJECT
Scoring Guide

This project is worth 100 points (A TEST Grade):

20 points for 5 horizontal lines and their equations	_____/20
20 points for 5 vertical lines and their equations	_____/20
20 points for 5 negative slope lines and their equations	_____/20
20 points for 5 positive slope lines and their equations	_____/20
10 points for meeting the deadlines	_____/10
10 points for creativity, neatness and uniqueness	_____/10
BONUS: 15 points for 5 quadratic equations	_____/15

Total: _____/100

Name: _____



Name: _____