Prep Day for Linear Equations Project

- **Cut this into strips.**
- **As a student finishes one level and it has been checked, take the strip they have and give them the next level.**

LEVEL 1:

- Create the following:
    - Line in slope-intercept form
    - Line in point-slope form
    - Horizontal line
    - Vertical line
    - A line with a positive slope
    - A line with a negative slope

LEVEL 2:

- Create 2 parallel lines that are not horizontal or vertical.
- Create 2 perpendicular lines that are not horizontal or vertical.

LEVEL 3:

- Create a line that has a restricted domain in one direction
- Create a line that has a restricted range in one direction
- Create a line that has the domain restricted in both directions.
- Create 2 line segments that intersect at an endpoint.

LEVEL 4:

-Create a triangle
-Create a parallelogram

**make sure the lines do not extend past the vertices of the triangle/parallelogram!!

Creative Art!

Due: _____

Your assignment is to create your own picture or design – a piece of Creative Art – using only linear equations. You will be using the Desmos.com Graphing Calculator. Be as creative as you would like.

This project will count as 30% of your Chapter 7 Unit 1 Test. The score that you receive will be added to your actual test score. You can choose how many points the project is worth. Projects that do not meet all of the criteria for one column will be given a score that reflects that. Check the rubric below to see the guidelines for the project.

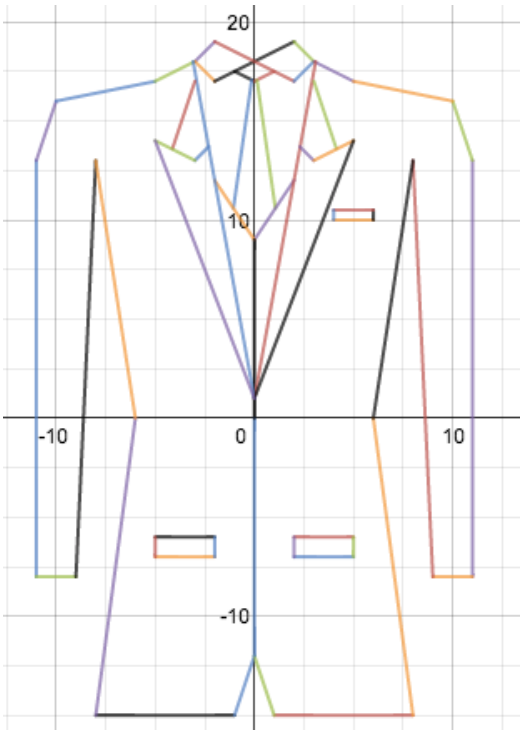
Turning in the Project

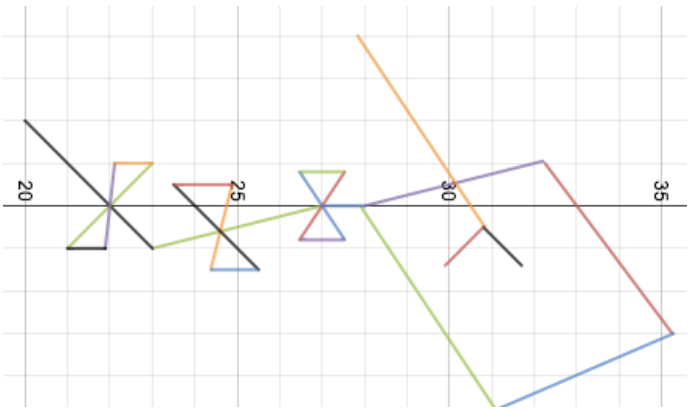
Your teacher will e-mail you with a Google form – You will give your name and provide the link to the project**. PLEASE NOTE: the link changes every time you save the graph.** Make sure that you give the most updated link (after the last time you save), and that the project is fully finished before you send the link – you CANNOT send it a second time!

Requirements:

3 sets of parallel lines	5 points
3 sets of perpendicular lines	5 points
3 lines in slope-intercept form	5 points
3 lines in point-slope form	5 points
3 restricted domains	2 points
3 restricted ranges	2 points
3 vertical lines	2 points
3 horizontal lines	2 points
Creativity	2 points

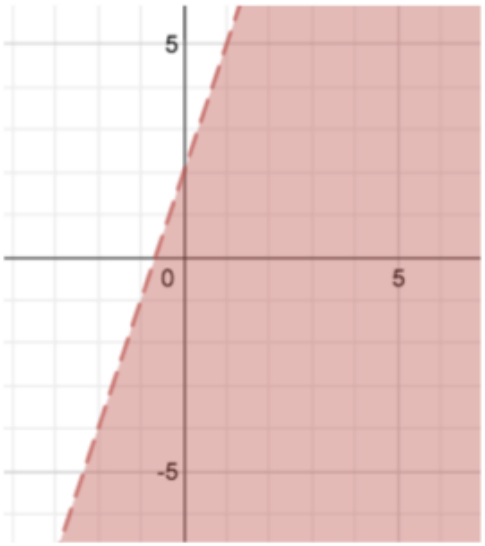
- **You may not use sliders**
- **Parallel and perpendicular lines cannot have a slope of 1, -1, 0 or undefined.**
- **Point-slope and slope intercept form cannot have a slope of 0 or go through the origin.**
- **Point-slope form equations cannot contain an x or y intercept as the point given.**
- **The project must BE something: No Abstract Art!**



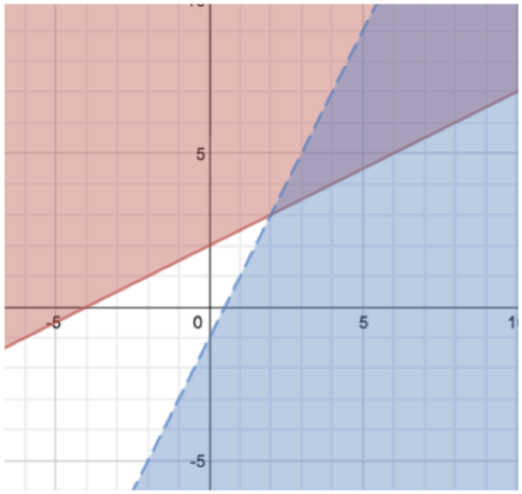


INEQUALITY CHALLENGE

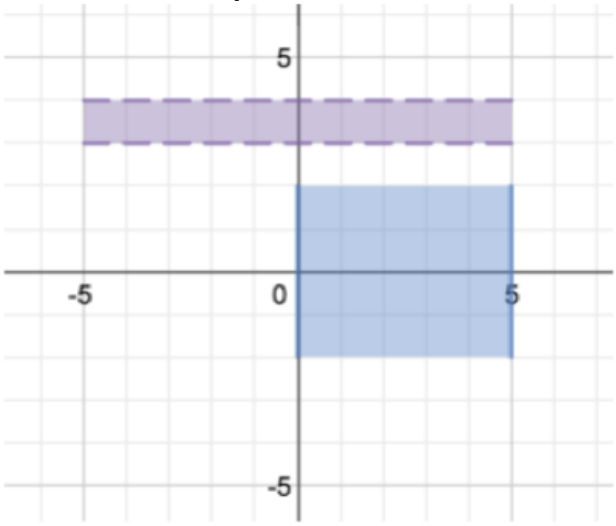
LEVEL 1: In one inequality



LEVEL 2: In 2 inequalities

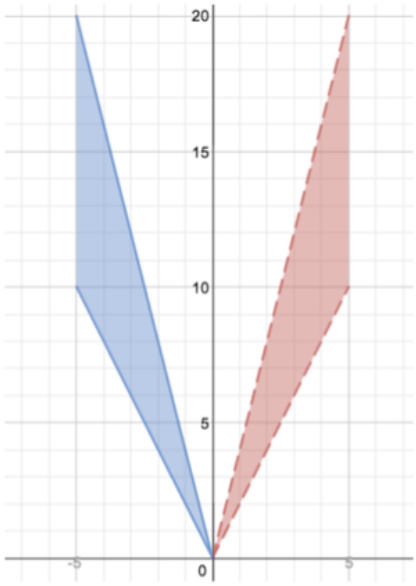


LEVEL 3: In 2 inequalities



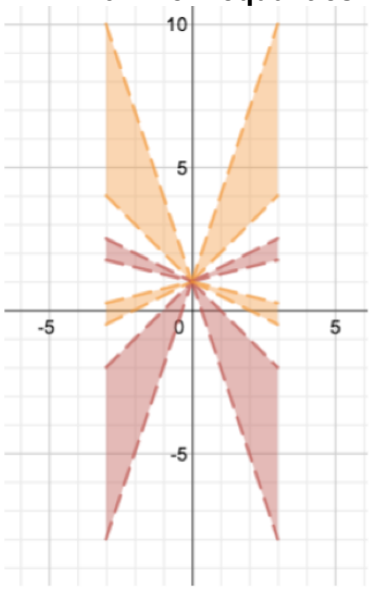
LEVEL 4: In 2 inequalities

LEVEL 4: In 2 inequalities



LEVEL 5: In 4 inequalities

LEVEL 6: In 8 inequalities



Sample test question:

- **Students walk in and the example is set out for them to recreate.**
- **Students submit their answer via a google form.**
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