Name: _____ **Date:** _____

GRAPHIC DESIGN PROJECT

You will create a graphic design by using (and building upon) your understanding of linear relationships.

Step 1: Decide what type of design you want to create. It could be a design for a sticker, tee-shirt, tote bag...whatever you want! Create a rough sketch on blank paper.
Your design must include at least:

- ❏ Three lines with positive slopes
- ❏ Three lines with negative slopes
- ❏ Two vertical lines
- ❏ Two horizontal lines
- ❏ Two lines that are perpendicular to one another (What do you notice about these lines? Tell me in your reflection!)

Step 2: Draw your graphic design more precisely on graph paper with a coordinate plane.

Step 3: Label each line with an equation. **Teacher Check** _____

Step 4: Create your graphic design using the desmos graphing calculator at *desmos.com*. *You will need to learn how to restrict the domain and range of each line so that they don't extend infinitely.

Step 5. Write a reflection about your work on this project. I want to hear what you learned (or remembered) while working on this project. In other words, explain what you know about the graphs of linear relationships. I expect thorough, in-depth answers with examples and maybe even diagrams. If you'd like, you may make a list, but be sure to explain each item on the list.
If you're not sure where to start, here are some questions to get you thinking:

- **What did you need to know to complete this project? How does one do those things?**
- What did you learn while working on this project?
- Describe a misconception you had about equations/graphing and how your thinking changed.
- Tell me about any questions/problems/wonderings that came up as you were working on this project.

You will need to turn in:

- ☐ Original sketch on blank paper
- ☐ Sketch on graph paper with labeled equations
- ☐ Link to desmos project. Please submit on Google Classroom
- ☐ Reflection (may be typed or handwritten)