

Lesson Context

BIG PICTURE of this UNIT:	<ul style="list-style-type: none"> • mastery with algebraic skills to be used in our work with linear functions and equations. • understanding various properties of basic functions and linear equations • how do manipulate equations with more then one variable? 		
CONTEXT of this LESSON:	<p>Where we've been</p> <p>We have worked with slope and some linear ideas in spaghetti lab.</p>	<p>Where we are</p> <p>Today we put on the designers hat working with a LOGO COMPANY and linear equations. This will be done on the TI-84</p>	<p>Where we are heading</p> <p>How can I use my knowledge of linear relationships to develop linear functions?</p>

Lesson Objectives:

Task 1: Warm Up with some old material and some new.

Task 2: Line Factory Logo Part 1 w/ **TI 84 Calculator**

Task 3: Brain Storm your Own LOGO

Task 4: Create the "Key" for your own LOGO

Task 1: Warm Up

1. Solve the following for x. $2 - 3x = \frac{1}{5}x - 5$

2. Solve the following for y.

$$3y + 6x = -12$$

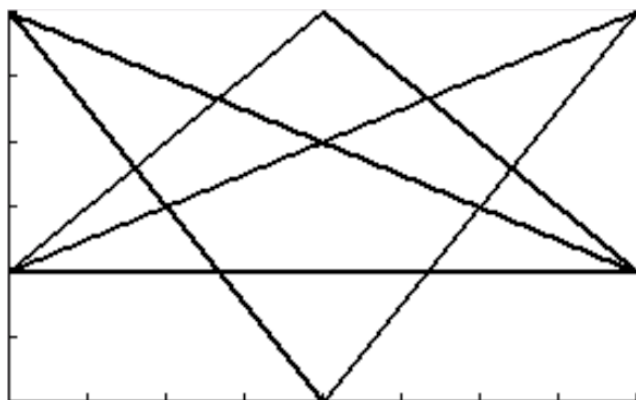
$$y - 5 = \frac{1}{4}(x + 2)$$

Task 2: Line Factory Logo Part 1

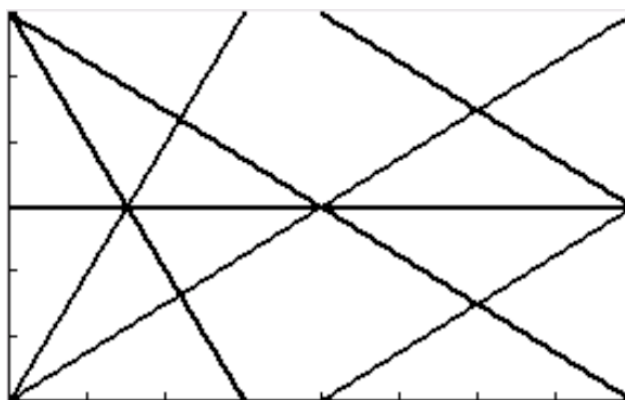
The Line Factory needs a new logo for its pamphlet. After much work by the design staff, the two logos shown below were proposed.

The only problem is that the staff clerks need to have the equations of the lines in each design to program their pamphlet-production software.

Logo A



Logo B



Your Task: Find the equations of the lines in Logo A and B and recreate the graphs on your calculators. Split your team into two pairs so that one pair works on Logo A while the other works on Logo B.

Find the equations of the lines in your design and then use your grapher to check them. Assume that the axes shown above are scaled by ones.

Also, be sure to set your window as shown at right so that the x-axis contains values between 0 and 8 and the y-axis contains the values between 0 and 6. Once you have found all of the equations, draw all of the lines simultaneously on the same set of axes to recreate the logo on your grapher.

Window

Xmin = 0
 Xmax = 8
 Xscl = 1
 Ymin = 0
 Ymax = 6
 Yscl = 1
 Xres = 1

Task 3: Line Factory Logo Part 2

Hello Design Team! We have been working all night and finally you came up with the equations for the computer. However the client was not happy with the design and changed their minds. We had to fire the design team, and are hoping you can come up with something that will be liked by the customers.

Your Task: Create a LOGO of your own design.

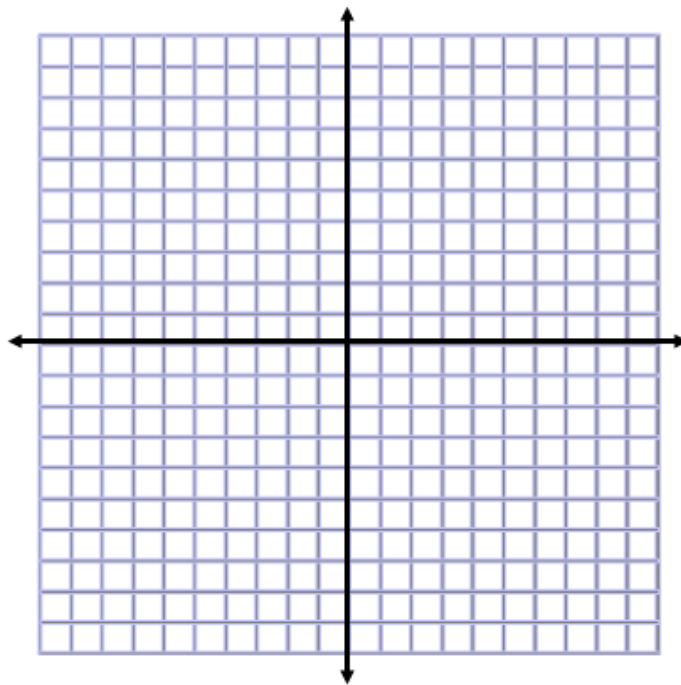
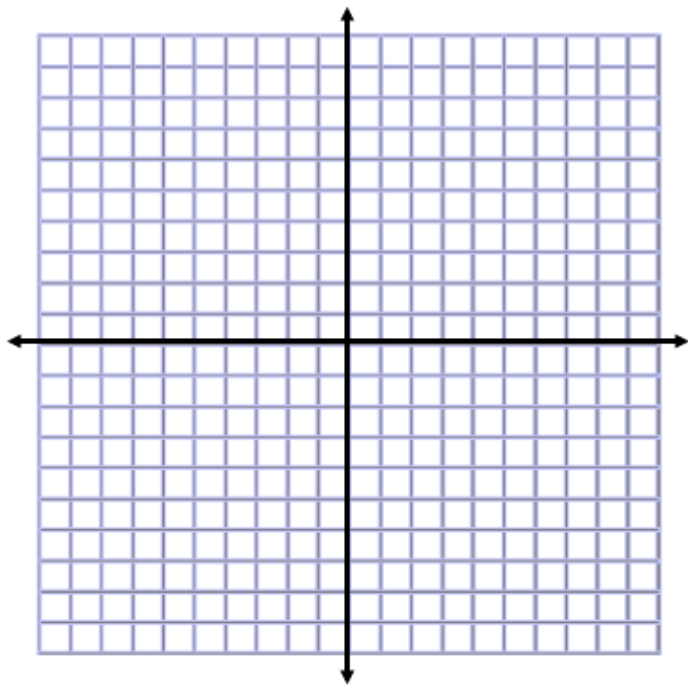
1st Create the Logo in the space provided

2nd Decide on the Window that you want people to view the design from

3rd Come up with the equations for the design in $y = mx + b$ form.

4th Put your design on a neat separate sheet of paper so that others may try and recreate it!

Start Brainstorming ideas.



Lesson 3.4 Line Factory Logo | Unit 3 – Linear Functions

What will your window be? Outline it in your final draft with red or blue pen. Then give us the numbers for your window below. Then Write the equations of the lines in your Design

Window
X-Min _____
X-Max: _____
X-Scale: _____
Y-Min: _____
Y-Max: _____
Y-Scale: _____

Equations:	
1: _____	7: _____
2: _____	8: _____
3: _____	9: _____
4: _____	10: _____
5: _____	11: _____
6: _____	12: _____

Final Draft: Title of Design: _____

Remember to outline your "window" with red or blue

