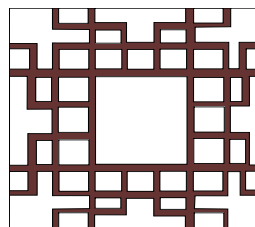
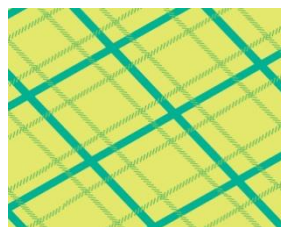
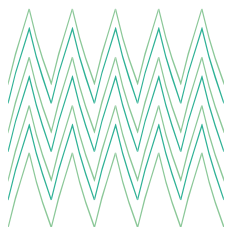


# DESIGN PROJECT

## Goals:

1. Students will understand the relationship between algebraic and geometric representations of linear functions.
2. Students will understand how linear graphs are visible in Nature, Art and Computer Aided Design.

**Project:** You will create a design by using linear functions



**Stage1:** Draw you design on the graph paper that is enclosed. Your group will have the same design but **every member of the group** will have to turn in their own copy.

**Stage 2:** For each line you have used in your design, write an equation in the **slope - intercept form and its domain.**

**Stage 3:** Go to [www.geogebra.org](http://www.geogebra.org) and download it (it is free). Follow the format we have discussed (Function [function, beginning x value, ending x value]) to enter your equations. You will render your design in Geogebra and then copy it (Click on file, export, graphics view to clipboard) to paint (Click the home button, accessories, paint) to color it.

**Step 4.** You will create a five – slide power point presentation:

- a. First page will include your group name and the title of your design.
- b. Second page will include the design.
- c. Third page will include the equations and domains of all the lines used in your design in y – intercept form.
- d. Fourth page will include the equations of half of your lines in point – slope form
- e. Fifth page will include a summary of your self- reflection on learning sheet.

## DESIGN PROJECT RUBRIQUE

	<b>1 Point</b>	<b>3 Points</b>	<b>5 Points</b>
<b>CREATIVITY</b>	Design consists of 4 to 10 lines	Design consist of 10 to 15 lines	Design consists of 15 to 20 or more lines
<b>MATHEMATICAL CORRECTNESS OF GRAPHS, FUNCTIONS AND DOMAINS</b>	Less than quarter of graphs match equations and domains	Half of graphs match equations and domains	All graphs match equations and domains
<b>POWER POINT REPORT</b>	Power point contains only two of the required items	Power point contains only three of the required items	Power point contains all five required items.
<b>SELF AND PEER EVALUATION DURING THE STAGES OF THE PROJECTS</b>	The team member fully participates in at least two stages of the projects	The team member participates fully in three stage of the project	The team member participated in all four stages of the project.

### **GRADING RUBRIQUES:**

- |   |      |
|---|------|
| 1. Creativity                                       | 20pt |
| 2. Mathematical correctness of graphs and equations | 50pt |
| 3. Power Point report                               | 20pt |
| 4. Team work  | 10pt |

**You can email me your PowerPoint file at [rndao@stlcc.edu](mailto:rndao@stlcc.edu) and also hand me a hard copy of your design project along with the last page of this handout**

### **Team Work**

You will share among the members of your group 10 points.

Use the grading rubric (Self and peer evaluation row) in the previous page as a guide

Group Member Name	Team Work Score	Explanation

# SELF-REFLECTION ON LEARNING

Spend a few minutes to analyze your performance on group and individual tasks.

<b>Name:</b>	
<b>Project Name:</b>	
<b>Describe the project in a sentence or two:</b>	
<b>What is the most important thing you learned during this project:</b>	
<b>What do you wish you had spent more time on:</b>	
<b>What big idea(s) did this project help you understand?</b>	
<b>What do you wish you had done differently:</b>	
<b>What part of the project did you do your best work on:</b>	
<b>What was the most enjoyable part of this project:</b>	
<b>What was the least enjoyable part of this project:</b>	
<b>How could your teacher(s) change this project to make it better next time:</b>	