

Name: \_\_\_\_\_

Period: \_\_\_\_\_

## Algebra 1

**Chapter 6: Systems of Linear Equations and Inequalities**

Targets	Learning Targets	Got it	Ok	No way
<b>T 6-1</b>	I can solve systems of equations by graphing and determine the number of solutions. I can use this to solve real world situations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>T 6-2</b>	I can solve systems of equations by using substitution and determine the number of solutions. I can use this to solve real world situations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>T 6-3</b>	I can solve systems of equations by using elimination and determine the number of solutions. I can use this to solve real world situations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Target	Lesson/Activity	Homework Assignment o = only do odd problems	Turned In?
	Parallel and Perpendicular Test Introduce Prom Project	Find 2 Bands or DJ's	
<b>T 6-1</b>	6.1 Graphing Systems of Equations	6.1 Pg. 338 # 25, 26, 27-41o  Write equations for each Band/DJ and Graph	
<b>T 6-2</b>	6.2 Substitution	6.2 Pg. 347 # 8-22 all, 24  Find 2 Caterer's	
<b>T 6-3</b>	6.3 Elimination Using Addition and Subtraction	6.3 Pg. 354 # 7-29o, 30  Write equations for each Caterer and Graph	
	6.4 Elimination Using Multiplication	6.4 Pg. 360 # 7-20 all  Create a scatter plot for previous years prom attendance	
<b>T 6-1</b> <b>T 6-2</b> <b>T 6-3</b>	6.5 Applying Systems of Equations	6.5 Worksheet  Create trend line to make a prediction for this year's attendance	
	Chapter 6 Review	Review Pg. 379 # 9-55 all	
	Chapter 6 Test	<b><i>You must have 4 Stamps in Order to Retake!!</i></b>	
<b>3/12-3/13</b>	Work Day		
<b>3/14-3/17</b>	First Draft of Project Due	Peer Review	
<b>3/18-3/19</b>	Work Day	Final Day to Work! Project Due next class!	
<b>3/20-3/21</b>	Final Draft DUE	Presentations Begin	

## Retake Problems

Target		Problems
T P-1	I can determine if lines are parallel and write equations for parallel lines.	Parallel Lines Retake Problems
T P-2	I can determine if lines are perpendicular and write equation for perpendicular lines.	Perpendicular Lines Retake Problems

## The Prom



Dear Algebra One Student,

The prom committee has asked our class to come up with a way of determining how much money it would cost to put on a high school prom and also what ticket price to charge each student to pay for it. The committee would like to hire a band or a DJ to play music for our 4 hour prom, and a caterer to provide food. The prom committee has a \$500 to pay for any other hidden costs (decorations, photographers, etc.)

You will be asked to work solo or choose up to two partners and complete the following tasks:

- Decide on which band or DJ to use. Some factors include:
  - Do the bands or DJ's charge a flat rate or so much per hour?
  - Provide contact information and type of music.
  - Be able to justify your choice.
- Decide on which caterer to use. Some factors include:
  - What is the fixed cost and how much does it cost per student
  - Determine the total cost of the caterer based on how many students will attend.
  - Provide contact information and type of food that will be served.
  - Be able to justify your choice.
- Predict how many students will attend.
  - Collect data from attendance of previous proms.
- Decide the total cost of the prom and the ticket price to charge each attendee of the prom.
  - Choose to charge students a bunch to make a profit.
  - Or just enough to cover the total cost of prom.
- Write a report detailing your choice of band or DJ, and the cost of a catering service and support your group's decision with mathematical evidence based on the number of students attending. Your report should also include a summary of the overall cost of the prom. You should also make recommendations on what ticket price to charge. You should also provide mathematical reasons for your suggestions.

Good luck to all of you!

Mahony

WHAT WE KNOW:

WHAT WE NEED TO KNOW:

## Contact Information and Equations

### DJ/ Band #1 Information

Name: \_\_\_\_\_

Contact Info: \_\_\_\_\_  
\_\_\_\_\_

Pricing: \_\_\_\_\_

Music Type: \_\_\_\_\_

Source: \_\_\_\_\_

Equation:

### DJ/ Band #2 Information

Name: \_\_\_\_\_

Contact Info: \_\_\_\_\_  
\_\_\_\_\_

Pricing: \_\_\_\_\_

Music Type: \_\_\_\_\_

Source: \_\_\_\_\_

Equation:

### Caterer #1 Information

Name: \_\_\_\_\_

Contact Info: \_\_\_\_\_  
\_\_\_\_\_

Pricing: \_\_\_\_\_

Food Type: \_\_\_\_\_

Source: \_\_\_\_\_

Equation:

### Caterer #2 Information

Name: \_\_\_\_\_

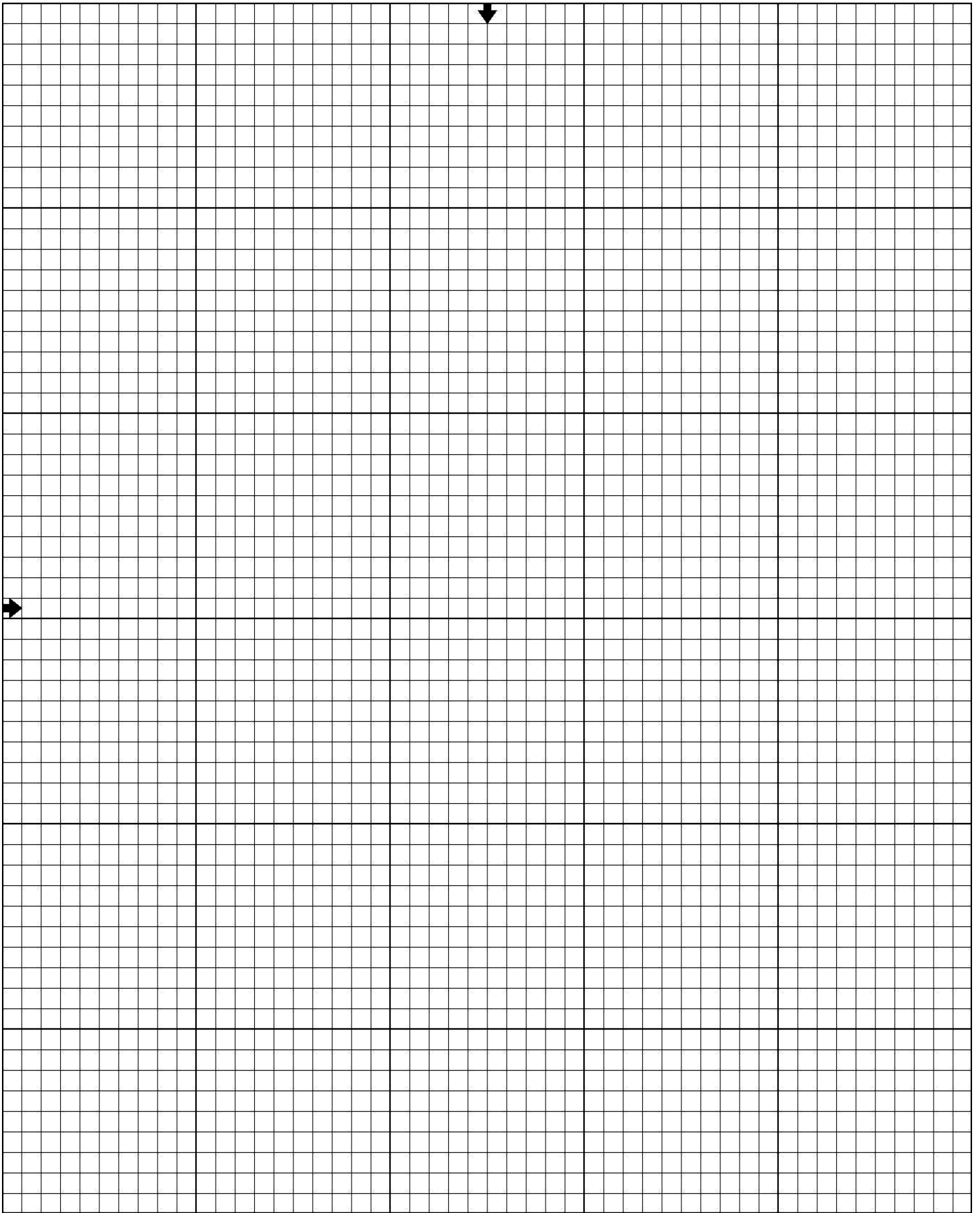
Contact Info: \_\_\_\_\_  
\_\_\_\_\_

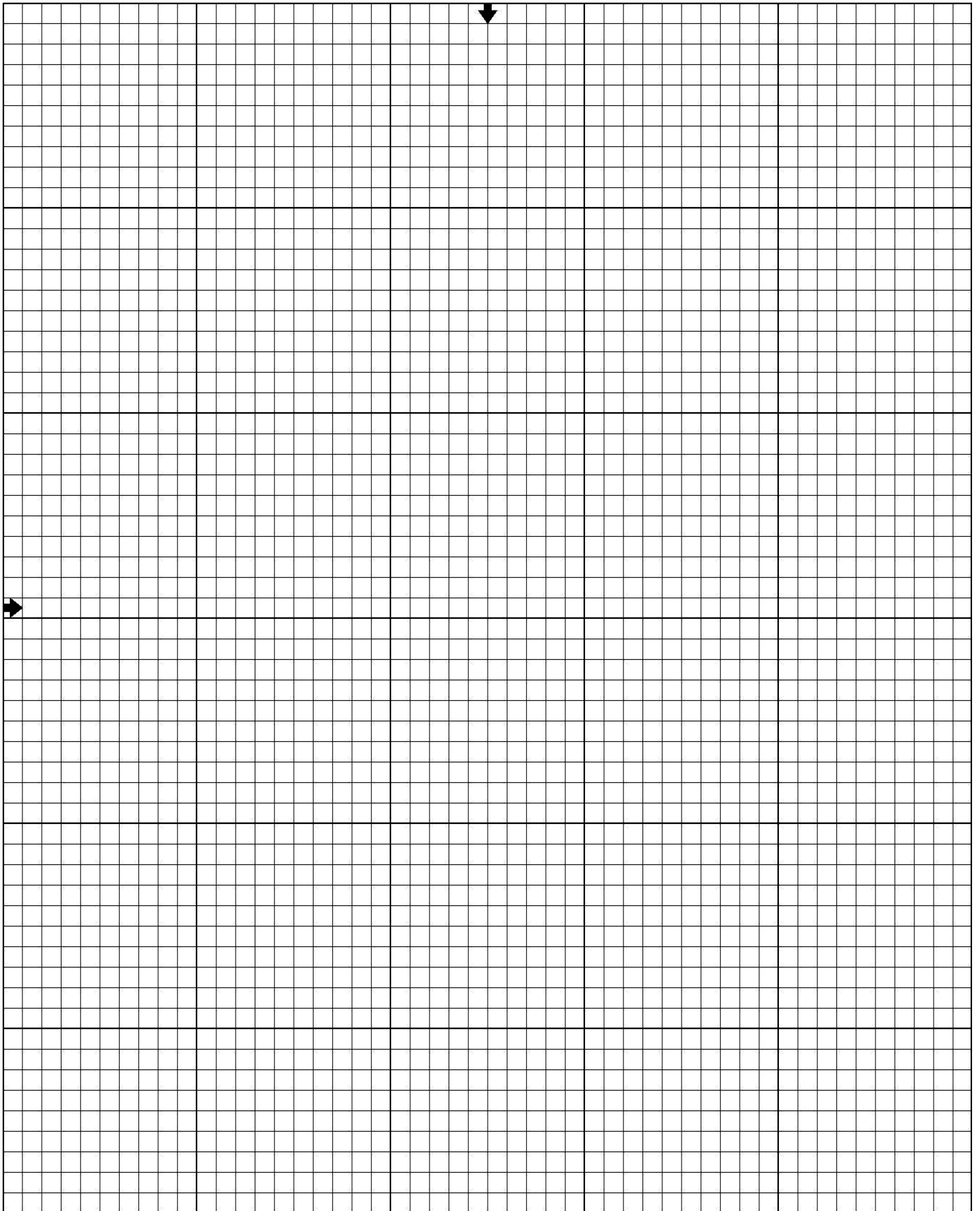
Pricing: \_\_\_\_\_

Food Type: \_\_\_\_\_

Source: \_\_\_\_\_

Equation:





## **Prom Check List**

*Refer to Grading Rubric to confirm requirements*

For this project you may work with a group of three people max; of course you still have the option to work alone if you would like. Students are all required to turn in their own project, which means you may work together but everyone needs a copy! All students in the group should understand all parts of the project and be able to present on all parts.

We will progressively work on this project throughout the chapter. After the test we will have one day to work in class. The next day is when your first draft of your project is due so we can complete a peer review in class. You will then be given the next class day to fix any issues found during the peer review and finalize your project.

**Final Projects will be due March, 20<sup>th</sup> and 21<sup>st</sup>, we will begin presentations on that day!**

This project will be completely **Electronic**, the only things allowed to be hand written is your graphs and your math work.

### **Choice of Band/DJ:**

- Research and find **TWO** bands or DJ's that could provide entertainment at this year's prom.
- Filling out the Contact Information and Equations Worksheet for both bands/DJ.
- Writing equations for total cost of each band and graph them on the same graph provided to solve the system of equations. Make sure graph is clearly labeled and in appropriate increments.
- Make an educated choice of which band to use for the 4 hour prom using the graph.
- Write a one paragraph justification as to why you made your choice. Back up your choice by using information found on the graph.

### **Choice of Caterer:**

- Research and find **TWO** caterers that could provide hor d'oeuvre at this year's prom.
- Filling out the Contact Information and Equations Worksheet for both Caterers.
- Writing equations for total cost of each caterer and use Substitution AND Elimination to solve the system of equations.
- Make an educated choice of which caterer to use for the prom using the two methods and comparing to how many students are predicted to come to the prom.
- Write a one paragraph justification as to why you made your choice. Back up your choice by using the information you found from performing substitution and elimination on your system.

### **Predicting Prom attendance:**

- Gather information from Ms. Lingle about the previous year's attendance at prom.
- Create a scatter plot with the information that is clearly labeled.
- Create a line of best fit and use that equation to predict how many people will attend this year's prom.

### **Total Cost of Prom:**

- Write an equation for the total cost of prom, including catering charges and music entertainment.
- Create an equation for price of prom tickets and total money received from students buying tickets. Use guess and check to create more than one equation to come up with the appropriate ticket price you will suggest.
- Graph all equations on one graph.
- Using the graph make a recommendation for the proms ticket price.

### **Recommendation to the Committee:**

- Write a three paragraph report for the committee.
- One paragraph should contain information about the music entertainment and why you chose it.
- One paragraph should contain information about the caterer and why you chose it.
- The third paragraph should include your cost analysis on prom and your recommend ticket price. Provide justification about your recommendation using the math work used in the project.

### **Peer Review:**

- Each project will need a peer review that is done in class. Reviewer must follow the grading rubric provided to provide notes and suggestions for the project.
- We will have one day in class to change projects due to peer review suggestions. If you disagree with the suggestions you must explain your reasoning.

### **Presentation:**

- Completely Electronic. (PowerPoint, Glogster, Prezi, Podcast, YouTube, Video cast, etc.)
- Show and explain what you did and why you did it!
- All group members are to assist in the presentation.
- All group members should understand all parts of the project.