Proportional/Non-Proportional Project

**Students are randomly grouped in groups of two**

o Everyone should share the responsibility of the tasks

o Help each other to understand all concepts

o Be willing to cooperate with others on their ideas

o Make sure everyone is able to be vocal about their ideas

o Listen effectively

o Stay on task

o Be creative and have fun

**The assignment**

There are Two Parts to this project

• Part One -Chart Paper Project (Partner Portion)

o Create a real-world problem/situation that represents a proportional relationship

o Identify your x and y variables, the rate and unit rate, and write an equation

o Create a table of values that models your problem and label your x- and y-values

o Transfer your findings to a graph and be sure to correctly title, label, and number your graph

o Find a solution, an ordered pair from the graph, describe it in a complete sentence

o Explain how you know your situation represents a proportional relationship

o The first part of the block is to collaborate and create the First Draft

o The second part of the block is to transfer your ideas to the Chart Paper and add details

**The partners will turn in 1 poster (product).**

• Part Two – Recording/Video Explaining your Project (Individual Portion)

o Take a picture of your final project

o Each member is responsible for recording/video explaining their problem step-by-step

o The recording video portion is to be completed at home

o Use academic/mathematic vocabulary and act appropriately

o Use the recording form to guide you

o Recording should be a minimum of 2 mins to a maximum of 2 1/2 mins

o Email your videos to me of the recording and picture of your project

[katherinemyers@alpinedistrict.org](mailto:katherinemyers@alpinedistrict.org) or bring it to me on a thumb drive

o ONLY I will hear your recordings

**Each student will turn in their own recording and picture of their poster.**

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_ Per \_\_\_\_\_\_\_\_\_\_

**Unit 3 – Proportional Relationships Project / Assessment**

**Create a Real-world Proportional Situation:**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Unit Rate:** (including units)  **Define your variables:**  x-  y-  **Write an equation that represents the situation:**  y= | **Make a table:** (label your x- and y-values,  appropriately depending on your situation)  Show how you got your data.   |  |  | | --- | --- | |  |  | |  |  | |  |  | |  |  | |  |  | |
| **Graph it:** (title and label your graph and the x- and y-axis appropriately depending on your situation) | **Find a solution** (an ordered pair from your graph)  Label it and write your answer in a complete  sentence. |
| **How do you know your situation is proportional? Explain.** |

Use this information to create a second draft of your poster. Part I of the Assessment.

**Part 2: Recording/Video**

**Introduce yourself:**

1. My name is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. I worked with \_\_\_\_\_\_\_\_\_\_\_\_\_creating a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ relationship problem.

**Tell me about the situation or problem:**

3. Our problem was \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

4. The two values I am comparing are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

5.The rate of my problem is \_\_\_\_\_\_\_\_\_\_\_\_\_\_, and the unit rate is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

6. With that information we were able to write an equation and that equation is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Tell me about the table of values:**

7. We also created a table of values, the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ represented the x-values and the\_\_\_\_\_\_\_\_\_\_\_\_\_ represented the y-values.

8. We used x-values that fit our problem; for example: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

9. And we used \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (proportional constant/unit rate) to find the y-values.

**Tell me about the graph:**

10. All this information from the table was then transferred to the graph. The graph represented the relationship between \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

11. To explain this better we selected a solution. ( , ) meaning that, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

12. You can see this in the equation as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

13. You can see this in the table as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

14. You can see this in the graph as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

15. I know this situation represents a proportional relationship because \_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.