Story Graph Activity

Math 10 PrelB

Your Goal

- To demonstrate your understanding of gradient (slope) as it applies to possible real-life scenarios
- Use the skills that you have acquired so far to produce a final product that is accurate, creative and original
- Collaborate with your group members so that your final product has ideas from each member embedded into your final product



Example

Can you come up with a short story for the graph shown above?

Sample Story

You work at a fish store and today, you are asked to clean a 175 gallon fish tank. To do this you need to drain the tank with the help of a hose and siphon. You note that it takes an hour to drain 25 gallons, 2 hours to drain a total of 50 gallons, and so on. At a rate of 25 gallons per hour, it takes 7 hours for the tank to be completely empty.

Part A of Your Task

- ⊘ Get into groups of 4
- *⊘* Gather the appropriate materials:
 - ✓ Graph paper (chart paper)
 - Markers
 - Ruler or meter stick
- Draw a graph that can be used to create a story. The graph must have:
 - Axes and scale properly labeled
 - A variety of different gradients. Include at least one positive, one negative and one zero gradient.
 - O You must have at least 6 different parts that need to be interpreted.
 - O Enrichment: include a part that is non-linear
- ⊘ Be creative! Feel free to include appropriate images with your graph.

Part B of Your Task

- ⊘ Have your teacher verify that your graph meets the requirements
- Switch your graph with another group (this may be facilitated by the teacher to ensure that all groups get a new graph)
- You be the teacher ! You will evaluate your classmates' graph by filling in the scoring rubric. This will be given to the teacher when you are finished.
- Write a story that corresponds to the graph that you have just received. The story must include:
 - Interpretation of the intercepts
 - Interpretation of the positive, negative and zero gradients
 - Actual value of the gradients (i.e. you need to calculate the gradients and incorporate it into your story somehow)
 - ⊘ Creativity ☺

Part C of Your Task

- Check in with your teacher to ensure that you have met the requirements for the story
- Return the graph and your story to the group who created the graph
- Once you have received your original graph and story, it is your turn to be the teacher! In your group, read the story and check to see that it matches the graph that you have created. You will evaluate this using the rubric that will be given out to you.