7th Grade Math Summer 2016

Name_____ Date _____

Please answer all of the following questions on a separate sheet of paper and be sure to SHOW ALL OF YOUR WORK. Complete the self-assessment on the rubric. Indicate the level you feel you achieved for each category. This assignment is due Thursday, September 8th, 2016.

Task #1

Background information:

Tom and Diane have both signed up to compete in a race over the summer. This race will be exactly 100 yards long. They have begun keeping track of how fast they can run to prepare for the race. Tom can run six yards in four seconds and Diane can run five yards in three seconds.

Questions:

1) Who runs faster, Tom or Diane? How do you know?
2) If they continue to run at the same speed, who will reach 100 yards first?

Task #2

Background information:

You and your family plan to go to the beach this summer. When you arrive to the beach the first day of summer, there are different rates your family can pay depending on how many family members you have and how many times you actually go to the beach.

Beach Summer Rate Plans

Plan A: Pay $ 2.75 per person to visit the beach.

Plan B: Monthly membership is $7.50 for each person, but you can go as many times as you like during the month.

Plan C: A family membership for a month is $15.25. Everyone in your family can go as often as they like for a month.

Questions:

1) If you and your brother go to the beach 8 times in July, which plan will be the cheapest?
2) If you, your brother and your parents go to the beach 3 times in July and 7 times in August, which plan will be the most expensive?

Rubric: *Summer Assignment*

Criteria	4	3	2	1	Self - Assessment	Teacher Score
Problem Solving	Use more than one strategy that was efficient to solve the problem. Analyzed, reflected, and made adjustments to the work on the way. **Note: Two correct and precise ways of solving the problem.**	Uses one correct strategy to solve the problem. **Work is correct and precise.**	Correct strategy is chosen, but either arrived to an incorrect answer, or did not solve the problem completely.	Chose incorrect strategy that did not lead to the correct solution.		
Reasoning and Proof	Provide evidence to prove mathematical process. Justifies decision-making. Generalizes the concept and extends mathematical thinking by proving two strategies. Uses precise mathematical language to explain and justify.	Arguments are constructed with adequate mathematical basis. Provides correct reasoning, supported by mathematical ideas. Uses at least two precise math vocabulary words to explain and justify.	Arguments are made with some correct reasoning. Uses at least one precise math vocabulary word in the reasoning.	No reasoning is provided, or incorrect reasoning is provided.		
Representations	Two accurate models and correct expressions/equations are included. Models are clearly and precisely labeled.	One accurate model and equations are included. Model is clearly and precisely labeled.	An attempt is made to create a model, but the model may have some mistakes, or is not labeled correctly.	Either no attempt has been made to create the model, or the model is completely incorrect.		
Content CCSS 6.EE.3 6.RP.2	Correct use of ratios, rates and expressions to complete the task with all supporting calculations. Work is organized and each step is correctly numbered.	Correct use of ratios, rates and expressions to complete the task with all supporting calculations.	Some correct use of ratios, rates and expressions to complete the task.	Student did not correctly apply ratios, rates and expressions to complete the task.		

Self-Assessment Checklist for Problem Solving Strategies

- Does my representation accurately display the problem?
- Did I include all of the labels, operation symbols, titles, and/or keys for the type of representation I chose?
- Did I connect my representations, and/or models to the equations and expressions?
- Did I clearly organize my steps?
- Did I explain all the steps that I took to solve the problem?
- Did I explain why I took those steps?
- Did I use precise math vocabulary to explain my thinking?

Reflection

Please include a self-reflection discussing the evidence you have to support your answers to the **Self-Assessment Checklist for Problem Solving Strategies**

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