** Mathematics Assignment 9**

**Planning a Day Camp**

**Date:** Due

**Overview:**

You are planning a five-day camp for 12- to 14-year-olds. Some possibilities are a sports, drama, computer, nature, art, or music camp.

**Preparation Work and Tasks:**

1. What type of day camp will you plan? **(1)**
2. Make a chart to keep track of the activities and lengths of time. Write the hours for each activity as a whole number, fraction, or mixed number. **(5)**
3. Choose an activity to plan on two days for a different fraction of an hour on each day. Enter the activity and lengths of time on your chart. How many hours are spent on the activity altogether? **(2)**
4. How much longer is spent on the activity on one day than the other? **(1)**
5. Plan an activity on two days for longer than 1 hour but less than 2 hours on each day. Make the length of time different for each day. Enter this on your chart. Estimate and then calculate the length of time for the activity altogether. Use your estimate to check. **(2)**
6. Estimate and then calculate how much longer is spent on the activity on one day than the other in question E. Use your estimate to check. **(1)**
7. Plan an activity for less than 1 hour on one day. Enter this on your chart. **(1)**
8. Plan an activity for less than 1 hour on another day. Enter this on your chart. **(1)**
9. Plan the same length of time for lunch each day, using a time less than 1 hour. Enter this on your chart. How long is spent on lunch altogether? **(2)**
10. Plan an activity for longer than 1 hour each day for the same length of time each day. Enter this on your chart. **(2)**
11. Plan a snack time each day that will take less than 1 hour for all the days. How long will snacks take each day? Enter this on your chart. **(2)**
12. Plan an activity for some days that will take longer than 4 hours altogether. Plan the number of days when the activity will happen. Estimate and then calculate the length of time for this activity on each of the days. Use your estimate to check. Enter this on the chart. **(2)**
13. Plan an activity for a fraction of 1 hour on three days and a different fraction of 1 hour on the other two days. Enter this on your chart. Use the order of operations to write an expression for the total length of time. How much time will be spent on this activity? **(2)**
14. Repeat step M for a different activity. **(2)**
15. What length of time is left for each day? If any days have more planned time than the length of time for the program, change your chart and answers for steps C to N for the lengths of time. Complete your chart by entering activities and lengths of time for any days that have unplanned time. **(4)**

**Evaluation:**

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| **Category** | **Level 4** | **Level 3** | **Level 2** | **Level 1** | **%** |
| Depth of Understanding | Demonstrates thorough understanding of concepts. | Demonstrates considerable understanding of concepts. |  |  | 20 |
| Problem Solving / Thinking | Use of procedure includes almost no errors or omissions. | Use of procedures is mostly correct, but there may be a few minor errors and / or omissions. |  |  | 20 |
| Application of Learning | Demonstrates sophisticated ability to make connections between mathematics learning and the real world. | Demonstrates considerable ability to make connections between mathematics learning and the real world. |  |  | 20 |
| Explanation and Justification of Concepts, Procedures, and Problem Solving | Provides thorough, clear and insightful explanations / justifications, using a range of words, pictures, symbols, and / or numbers. | Provides complete, clear and logical explanations / justifications, using appropriate words, pictures, symbols, and / or numbers. |  |  | 20 |
| Use of Mathematical Vocabulary | Uses a broad range of mathematical vocabulary to communicate clearly and precisely. | Uses mathematical vocabulary with considerable clarity and precision. |  |  | 20 |