Planning a Trip to the Amazon

You are a biologist visiting the Amazon River for the first time. You have researched the Amazon before coming to South America, but this is the first time you will see it...smell it...touch it in person. You decide to explore all 4,000 miles of the Amazon River by swimming from the source to the mouth (where the river flows into the ocean). Before you take this adventure, you prepare yourself for the challenge ahead. Here are the considerations you take into account:

Worksheet 1: Using Variables in Equations

1. You are concerned about getting sunburned during your swim, so you plan on having your support crew give you sunblock to reapply every two hours.
   a. If you swim for \( h \) hours per day, how many times will you have to put on sunblock?
   b. If you swim for 12 hours on Sunday, how many times will you have to put on sunblock?

2. You plan on taking a snack break every 20 minutes of your swim.
   a. If you swim for \( h \) hours per day, how many times will you eat during your swim?
   b. If you swim for 12 hours on Sunday, how many times will you eat during your swim?

3. You estimate that you will burn 7,500 calories each day of your marathon swim.
   a. If you swim for \( d \) days, write an expression for how many calories you will burn in the entire swim.
   b. If your swim takes you 73 days, how many calories will you burn during your entire adventure?
   c. If your swim takes you 64 days, how many calories will you burn during your entire adventure?

4. The Amazon rain forest is about 17 times the size of the United Kingdom and Ireland put together.
   a. Write an expression to represent the relationship between the Amazon rain forest and the U.K. and Ireland.
   b. If the Amazon rain forest measures about 5.5 million square kilometers, about how big is the U.K. and Ireland?

5. The average rainfall in the Amazon basin is about 2,300 millimeters (mm) per year.
   a. Write an expression to represent the amount of rain that falls in the Amazon basin for a given number of years.
   b. If you are in the Amazon rain forest for three months, about how much rain will fall there during that time?