

To Timbuktu By Equation

Your name: _____

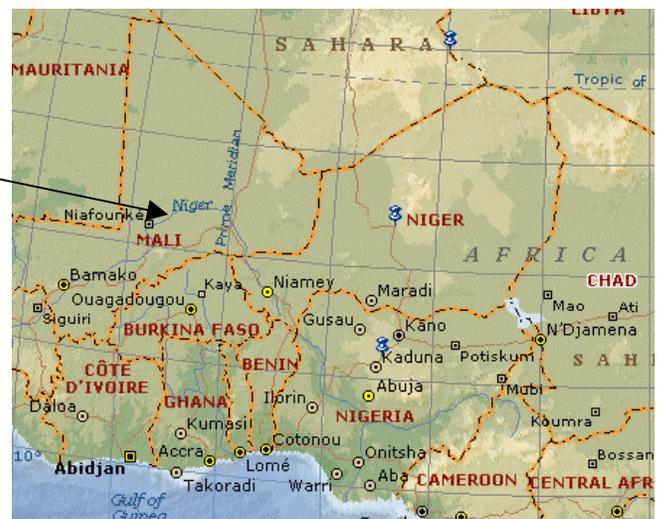
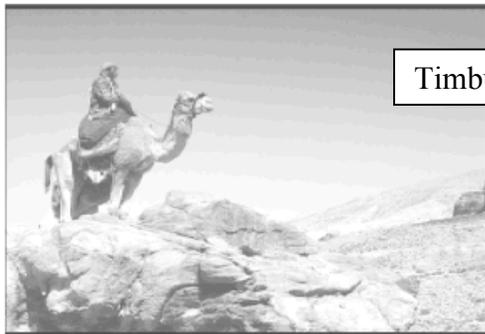
Your Group: _____

Your Role: _____

Background Information:

When traveling across the desert, it was easy to get lost without the help of Bedouin guides who knew their way from city to city. Even traveling the relatively short distance from the Kingdom of Ghana to Timbuktu was hard without a Bedouin guide.

Salim and Ali were brothers who were Bedouin Guides, and helped people make the journey from Ghana to Timbuktu.



Make the following assumptions:

- The brothers charged 25 oz. of salt per camel to take a caravan to Timbuktu.
- The brothers rented a camel for themselves, which cost 8 oz. of salt per day.

The brothers calculated their profit by using the following equation:

$$P = \frac{25C - 8D}{2}$$

Task: Answer the following questions. Support answers with reasons.

★ *Reminder: Calculators, Colored Cubes, and other tools are available to help you make sense of the mathematics.* ★

1. a. Describe the **variables** in the brothers' equation.

b. Explain why the brothers' equation makes sense.

2. Cousin Faisel was a competing Beduoin guide.

- He charged customers 0.5 oz of salt per camel, 0.25 oz of salt per man, 0.1 oz of salt per woman, and 0.05 oz of salt per kid to take a caravan to Timbuktu.
- Cousin Faisel had his own camel, and did not need to rent one for the journey.

Create an equation that represents Cousin Faisel's profit.

Product: Shuffle Quiz

- When your group is ready, the Resource Monitor should call over the teacher for a "shuffle quiz."
- Students will be randomly selected to answer the questions above (I will *shuffle* student papers). Be prepared to support your thinking with reasons.

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