Is the shortcut actually shorter? Day 1

4 miles

Home

3 miles
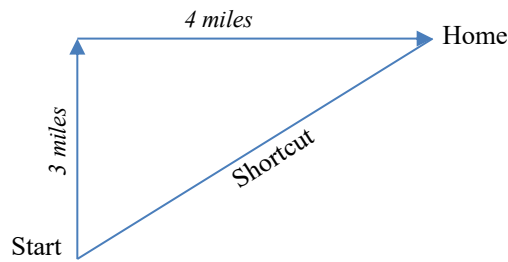
Shortcut

Start

Reese and her dad are on a very long walk. Her dad says they should go up 3 miles and over 4 miles. Reese says they should take a "shortcut" to get home faster. Is the shortcut actually shorter?

1. What is the total distance of the dad's path? Show your work.

2. Do you think the shortcut is actually a shorter distance? Make a guess at the shortcut distance.

Let's model the two different paths using pieces of spaghetti. Measure one piece of spaghetti to be exactly 3 inches and another to be exactly 4 inches. Then break a third piece of spaghetti to be the shortcut path.

3. Do you think the shortcut piece of spaghetti is longer or shorter than 3 inches? Compare the spaghetti pieces to be sure.

4. Do you think the shortcut piece of spaghetti is longer or shorter than 4 inches? Compare the spaghetti pieces to be sure.

5. Measure the actual length of the shortcut piece of spaghetti. How close was your guess from question #1?

6. How much shorter is the shortcut than the dad's path?

7. If the dad's path takes 84 minutes, how long would the shortcut take? How much time is saved?