Problem Solving:
Multiple-Step Problems

Some word problems have hidden questions that must be answered before you can solve the problem.

A paved trail is 4 miles long. Jess runs \( \frac{3}{8} \) of the length of the trail and walks the rest of the way. How many miles of the trail does Jess walk?

**What do you know?**
Jess runs \( \frac{3}{8} \) of an 4-mile trail.

**What are you asked to find?**
How many miles of the trail that Jess walks.

**How can you find the distance that Jess walks?**
Subtract the distance Jess ran from the length of the trail.

**What is the hidden question?** The hidden question will help you find data you need to solve the problem.
How many miles did Jess run?

To answer, find \( \frac{3}{8} \times 4 = 1 \frac{1}{2} \).

Use the data to solve: \( 4 - 1 \frac{1}{2} = 2 \frac{1}{2} \), so Jess walked \( 2 \frac{1}{2} \) of the 4 miles.

Write and answer the hidden question(s) in each problem. Then solve the problem.

1. Jared surfed for \( \frac{1}{3} \) of the 9 hours he was at the beach. He spent the rest of the time building a sand castle. How many hours did he spend building the castle?

   **Hidden question:**
   
   **Solution:**

2. April put gasoline in 4 of her 5-gallon cans and 6 of her 2-gallon cans. She filled all the cans to the exact capacity. How many gallons of gasoline did she buy?

   **Hidden question 1:**
   
   **Hidden question 2:**
   
   **Solution:**

3. It costs Le Stor $10 to buy a shirt. The store sells the shirt for \( 2 \frac{1}{2} \) times its cost. What is the profit for 100 of these shirts? Hint: Profit equals sales minus cost.

   **Hidden question 1:**
   
   **Hidden question 2:**
   
   **Solution:**