1) Write a proportion to model this situation, then solve it:

2) What aspect about scale models allows you to solve this problem this way?

**Lesson Objectives:**
- Apply proportions to solve similar figure and scale problems

**Vocabulary:** Similar Figures, Scale Drawing, Scale, Scale Model

**Similar Figures:**
What are similar figures?

What special property do they have?

What symbol is used to indicate two figures are similar?

Given that ABCD ~ EFGH, identify the corresponding parts.
The figures in each pair are similar. Find the missing length.

1)

2)

Scale Models:
How do scale models compare to similar figures?

3) A museum has a wax sculpture of a historical village. The scale is 1.5 : 8. If the height of a hut in the sculpture is 5 feet, how tall was the original hut to the nearest whole foot?

Applications:

Situation 1: On a map, the length of a river is 4.75 in. The actual length of the river is 247 miles. What is the scale of the map?

Situation 2: Sammy is constructing a model bridge out of sticks. The actual bridge is 1320 ft long. He wants the scale of his bridge to be 1 : 400. How long should the model be?

Thinking Problems:

Problem 1: A pizza shop sells small 6 in. pizzas and medium 12 in. pizzas. Should the medium pizzas cost twice as much as the small pizzas because they are twice the size? Explain.

Problem 2: Are all right triangles similar? Explain your answer.

Homework: 6 – 42 even, skip 30
- Decimal answers preferred