

WA 10 6.1 Assignment

- If a house is 40 feet long, 35 feet wide, and the top of the roof is 27 feet above ground level, what will the corresponding dimensions be of a model built so that 1 foot is represented by $\frac{1}{2}$ inch?
- Two triangles are similar. One has sides of 8 m, 5 m, and 6 m. If the longest side of the second triangle is 5 m, what are the lengths of the other two sides?
- A pentagon has interior angles of 108° , 204° , 63° , 120° , and 45° . Rudy wants to draw a similar pentagon with sides twice as long as the original. What size will the angles be?
- Theresa folds origami paper to make stacked boxes. The outer box is 12 cm by 8 cm by 4 cm. Theresa would like to make three smaller, similar boxes, each scaled down by $\frac{1}{4}$ of the previous box. What are the dimensions of the three smaller boxes?

PRACTISE YOUR NEW SKILLS

- The scale of a model airplane to the actual airplane is 2:45. If the model is 38 centimetres long, how long is the actual airplane?

- Michaela has a microscope that enlarges images between 40 and 1600 times. How large will an object that is 1.2 mm by 0.5 mm appear to be at each of these extremes?

5. Marie-Claude has a series of four nested funnels in her kitchen that are similar to the one shown in the diagram. If the other three funnels have top diameters of 10 cm, 8 cm, and 6 cm, find the measures of the remaining parts for all three funnels.

