5-10B Lesson Master

Uses Objective J

1. Kurt creates a scale drawing of his room. The length of his room is 14 feet. He uses 2 inches to represent 3 feet. What measurement does he use to represent the length of his room on his drawing?

2. An artist creates a design for a stained glass window that has a width of 21 inches and a length of 45 inches. The width of the design is 2 more than \( \frac{1}{3} \) its length. What are the dimensions of the design the artist created?

3. A deck is built around a rectangular swimming pool with a length of 20 feet and a width of 14 feet. The length of the deck is 9 feet longer than its width. What is the perimeter of the deck?

A picture frame is often marked by the size of the picture it can hold. The ratio of the length of the photo opening to the length of a picture frame is 3 to 5.

4. What is the length, \( L \), of the frame?

5. What is the width of the frame?

6. What size picture will this frame hold?
   - A 3" × 5"
   - B 5" × 7"
   - C 8" × 10"
   - D 0" × 13"
These two figures are similar.

7. What is the ratio of similitude of the larger figure to the smaller figure? ________________

8. What are the missing lengths of the smaller figure? ________________

9. Which set of figures is not similar? ________________

In 10 and 11, a triangle has sides of lengths 5 inches, 12 inches and 13 inches.

10. Find the perimeter of a similar triangle whose longest side is 10.4 inches. ________________

11. What is the ratio of similitude of the smaller triangle to the larger triangle? ________________