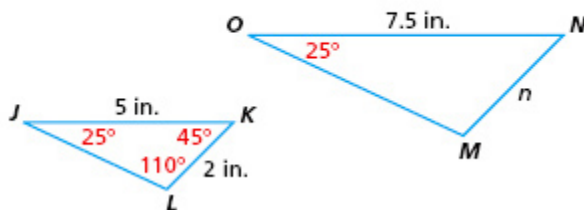Proportional Relationships

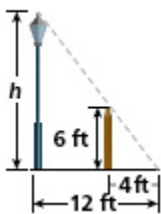Applications of Proportion

7.2.1 Similar Figures

1. The two triangles are similar. Find the missing length n and the measure of $\angle M$.

2. LeJuan swims in a pool that is similar to an Olympic-sized pool. LeJuan's pool is 30 m long by 8 m wide. The length of an Olympic-sized pool is 50 m. To the nearest meter, what is the width of an Olympic-sized pool?

7.2.2 Indirect Measurement

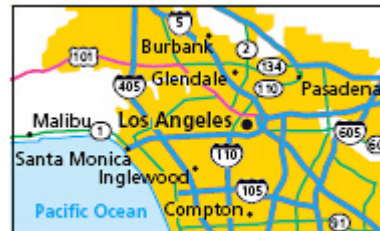3. Use the similar triangles to find the height of the lamppost.

4. The Eiffel Tower casts a shadow that is 328 feet long. A 6-foot-tall person standing by the tower casts a 2-foot-long shadow. How tall is the Eiffel Tower?

7.2.3 Scale Drawings and Maps

5. On the map of California, Los Angeles is 1.25 inches from Malibu. Find the actual distance from Los Angeles to Malibu.

Scale: 1 in:20 mi

6. Riverside, California, is 50 miles from Los Angeles. On the map, how far should Riverside be from Los Angeles?

7. **Life Science** A paramecium is a one-celled organism. The scale drawing at right is larger than an actual paramecium. Find the actual length of the paramecium.

Scale: 1 in:0.005 in.