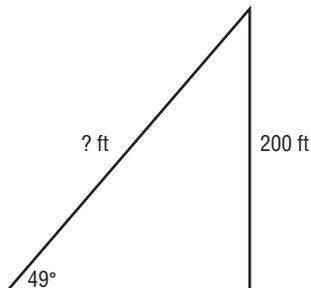## 8-4 Word Problem Practice
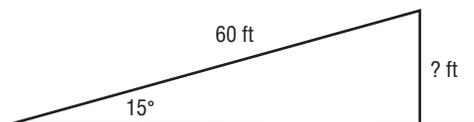
Trigonometry

1. RADIO TOWERS Kay is standing near a 200-foot-high radio tower.

Use the information in the figure to determine how far Kay is from the top of the tower. Express your answer as a trigonometric function.
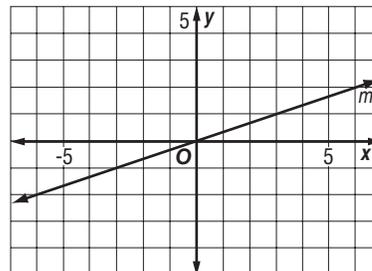
2. RAMPS A 60-foot ramp rises from the first floor to the second floor of a parking garage. The ramp makes a 15° angle with the ground.

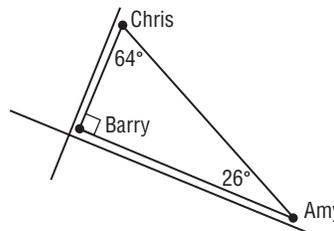How high above the first floor is the second floor? Express your answer as a trigonometric function.

3. TRIGONOMETRY Melinda and Walter were both solving the same trigonometry problem. However, after they finished their computations, Melinda said the answer was 52 sin 27° and Walter said the answer was 52 cos 63°. Could they both be correct? Explain.

4. LINES Jasmine draws line m on a coordinate plane.

What angle does m make with the x-axis? Round your answer to the nearest degree.

5. NEIGHBORS Amy, Barry, and Chris live on the same block. Chris lives up the street and around the corner from Amy, and Barry lives at the corner between Amy and Chris. The three homes are the vertices of a right triangle.

a. Give two trigonometric expressions for the ratio of Barry's distance from Amy to Chris' distance from Amy.

b. Give two trigonometric expressions for the ratio of Barry's distance from Chris to Amy's distance from Chris.

c. Give a trigonometric expression for the ratio of Amy's distance from Barry to Chris' distance from Barry.