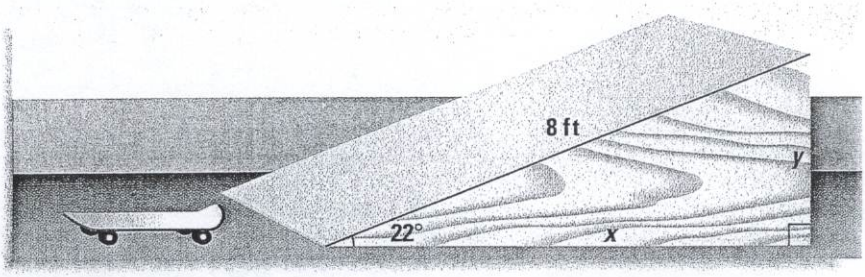
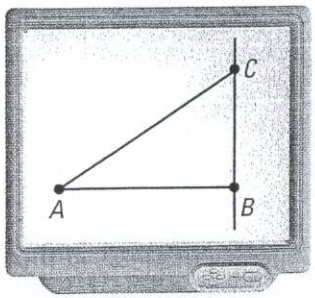
Visualize It! A ladder that is 15 feet long is leaning against a wall. The ladder makes an angle of 70° with the ground. Make a sketch. Then determine how high up the wall the ladder reaches. Round your answer to the nearest foot.

. **Skateboard Ramp** You are constructing a skateboarding ramp like the one shown below. Your ramp will be 8 feet long and the ramp angle will be about 22°. Find the lengths of the legs of the triangles that support the ramp. Round your answers to the nearest inch.



Technology In Exercises 33–35, use geometry software.

1. Draw $\overline{AB}$.
2. Construct a perpendicular to $\overline{AB}$ through B.
3. Add point C on the perpendicular.
4. Draw $\overline{AC}$.

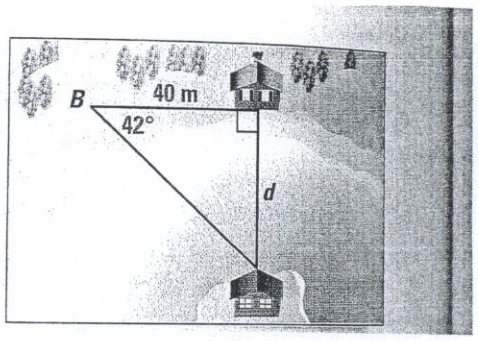


33. Find $m\angle A$, $\sin A$, and $\cos A$.

34. Calculate $(\sin A)^2 + (\cos A)^2$.

35. Drag point C. What do you notice?

. **Surveying** To find the distance d from a house on shore to a house on an island, a surveyor measures from the house on shore to point B, as shown in the diagram. An instrument called a *transit* is used to find the measure of $\angle B$. Find the distance d to the nearest tenth of a meter.



Error Analysis To find the length of $\overline{BC}$ in the diagram at the right, a student wrote $\tan 55° = \frac{18}{BC}$.