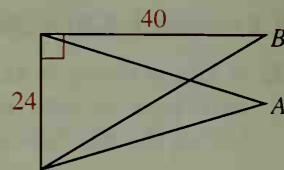
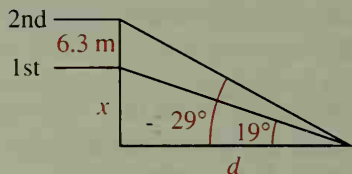


13. A soccer goal is 24 ft wide. Point A is 40 ft in front of the center of the goal. Point B is 40 ft in front of the right goal post.
- Which angle is larger, $\angle A$ or $\angle B$?
 - From which point would you have a better chance of kicking the ball into the goal? Why?



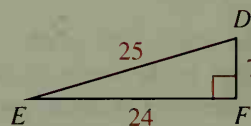
- C 14. From the stage of a theater, the angle of elevation of the first balcony is 19° . The angle of elevation of the second balcony, 6.3 m directly above the first, is 29° . How high above stage level is the first balcony? (Hint: Use $\tan 19^\circ$ and $\tan 29^\circ$ to write two equations involving x and d . Solve for d , then find x .)



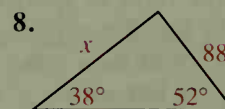
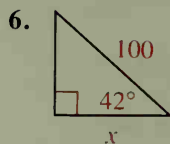
Self-Test 2

Exercises 1–5 refer to the diagram at the right.

- $\tan E = \frac{?}{?}$
- $\cos E = \frac{?}{?}$
- $\sin E = \frac{?}{?}$
- $\tan D = \frac{?}{?}$
- To the nearest integer, $m\angle D = ?$.



Find the value of x to the nearest integer.



9. From a point on the ground 100 m from the foot of a cliff, the angle of elevation of the top of the cliff is 24° . How high is the cliff?