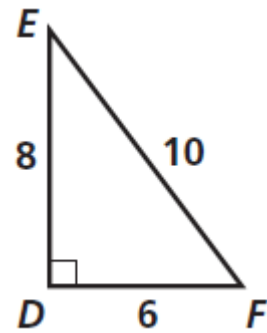


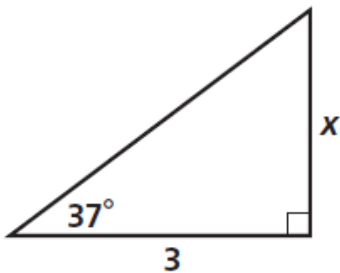
1a. Write the sine, cosine and tangent ratios for angle E.



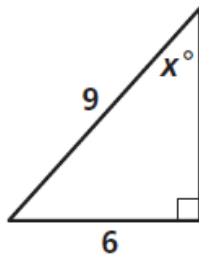
b. Use a calculator to find $m\angle E$ and $m\angle F$ (to the nearest degree).

2. Find the value of x . Round lengths of sides to the nearest tenth and angle measures to the nearest degree.

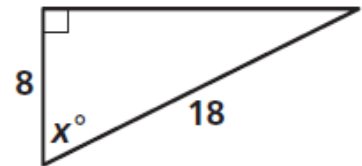
a.



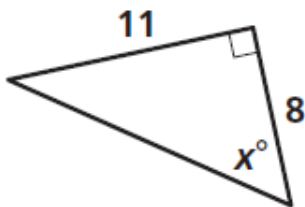
b.



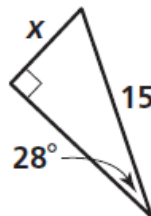
c.



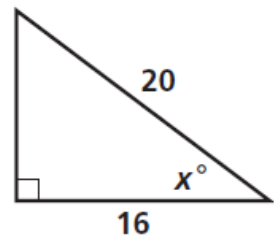
d.



e.

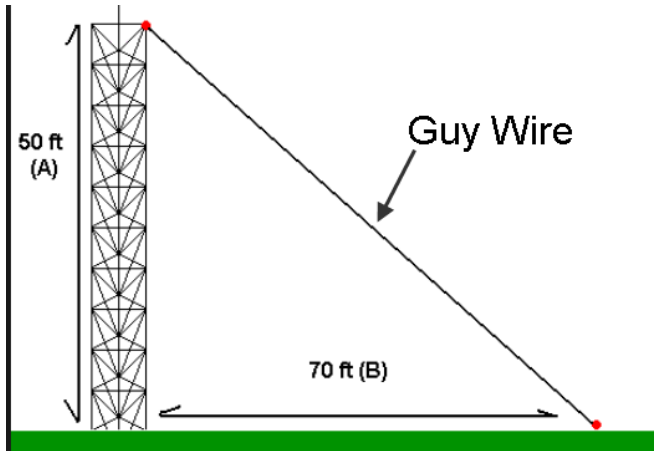


f.



3. A piece of lumber leans against a wall. The top of this 40 foot piece of lumber touches a point on the wall that is 36 feet above the ground. Draw a diagram to represent the situation and find, to the nearest degree, the measure of the angle that the lumber makes with the wall.

4. A “guy wire” is a cable used to stabilize a vertical structure. In the diagram below, a guy wire is stabilizing a 50 foot cell phone tower. The guy wire is anchored to the ground at a point 70 feet from the tower.

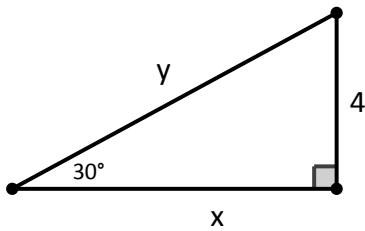


- a. Find the angle that the guy wire makes with the ground. (*to the nearest degree*)

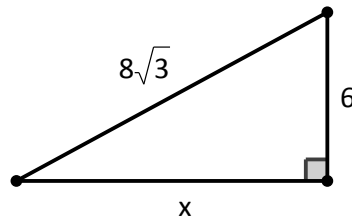
- b. How long is the guy wire, *to the nearest foot*? Show how you arrived at your answer.

5. **Mixed Review:** Give answers in simplest radical form.

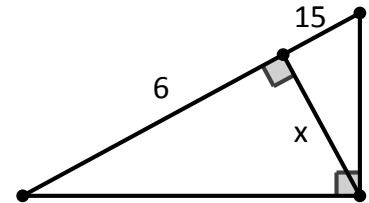
- a. Find the values of x and y .



- b. Find the value of x .



- c. Find the value of x .



- d. Given: $\angle ADE \cong \angle B$

Prove: $(AD)(AC) = (AE)(AB)$

