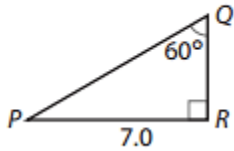


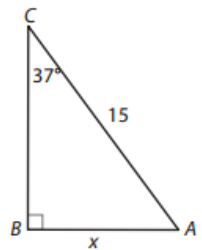
Module 13.1 & 13.2 can't
Show work for all problems.
 For 1-10, find the
 unknown length to the
 nearest hundredth.

1.

Find QR .

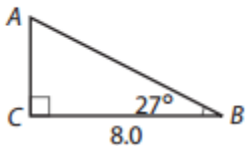


2. Find x .

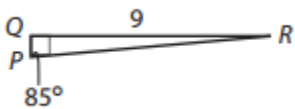


3.

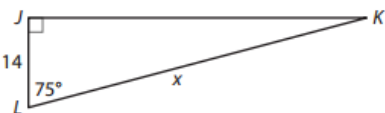
Find AC .



4. Find PQ ($m\angle P = 85^\circ$)

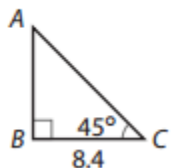


5. Find x .

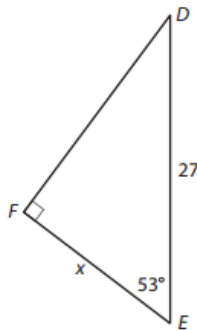


6.

Find AB .



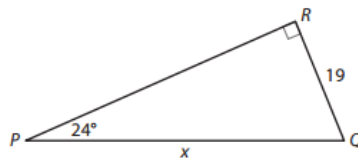
7. Find x .



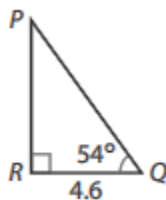
8. Find DE



9. Find x .

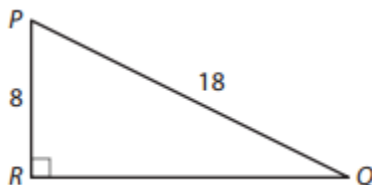


10. Find PR



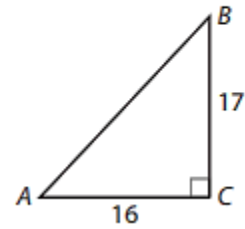
For 11-15 find the
 measure of the angle to
 the nearest degree. Use
 inverse functions.

11. $\angle P$ and $\angle Q$

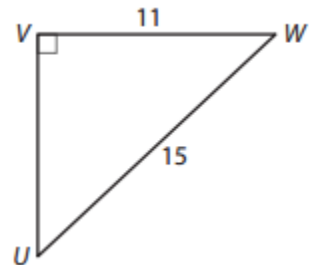


12.

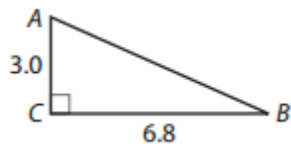
Find $\angle B$.



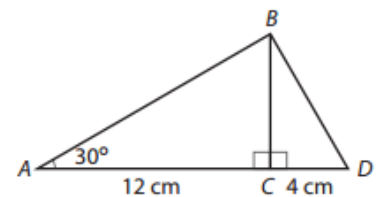
13. $\angle U$ and $\angle W$



14. $\angle A$



15. $\angle D$



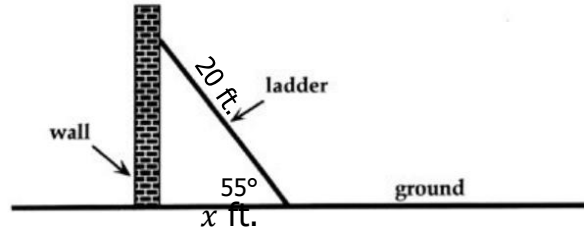
16. Given $\sin 60^\circ \approx 0.866$,
 write the cosine of a
 complementary angle.
 Round to the nearest
 thousandth.

17. Given $\cos 26^\circ \approx 0.899$,
 write the sine of a
 complementary angle.
 Round to the nearest
 thousandth.

Make a diagram, show work and give lengths to the nearest tenth and angles to the nearest degree.

Example: A 20 foot ladder rests against a wall. The ladder makes a 55° angle with the ground. How far from the base of the wall is the ladder?

$$\begin{aligned}\cos 55^\circ &= \frac{x}{20} \\ 20 \cdot \cos 55^\circ &= x \\ x &\approx 11.5 \text{ ft}\end{aligned}$$



1. A 20 foot ladder rests against a wall. The base of the ladder is 7 feet from the wall. What angle does the ladder make with the ground?
2. From the top of a 108 ft lighthouse, the angle of depression of a boat at sea is 27° . Find the horizontal distance from the boat to the base of the lighthouse.
3. You are flying a kite with 300 feet of string. The string makes a 42° angle with the ground. Find the height of the kite.
4. A painter is using a ladder to help reach the top of a house. If the house is 12 feet tall and the angle of the ladder needs to be at an angle of at least 60° and no greater than 75° in order to be safe, how far away should the painter place the ladder from the house? (Hint: do problem twice, once using 60° and once using 75°)
5. A 10 foot pole casts a 30 foot shadow. What is the angle of inclination of the sun?