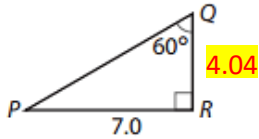


Module 13.1 & 13.2 con't

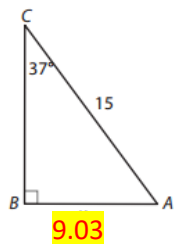
For 1-10, find the unknown length to the nearest hundredth.

1.

Find  $QR$ .

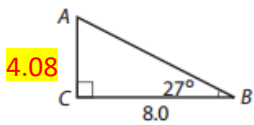


2. Find  $x$ .

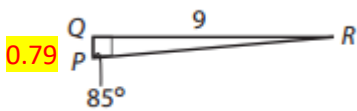


3.

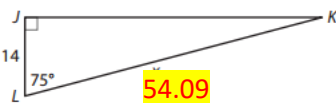
Find  $AC$ .



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

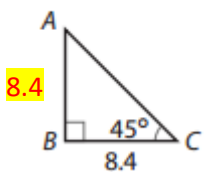


5. Find  $x$ .

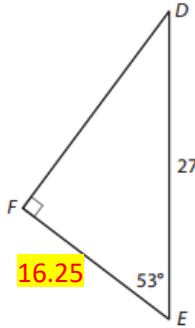


6.

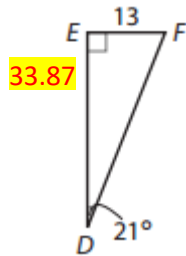
Find  $AB$ .



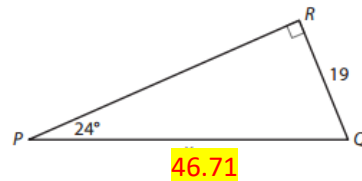
7. Find  $x$



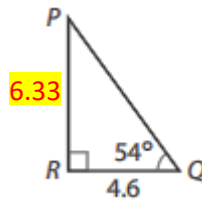
8. Find  $DE$



9. Find  $x$ .

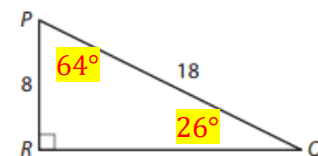


10. Find  $PR$



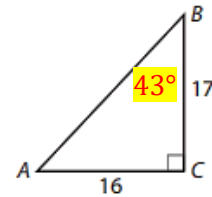
For 11-15 find the measure of the angle to the nearest degree. Use inverse functions.

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

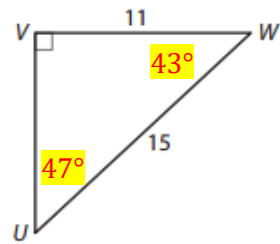


12.

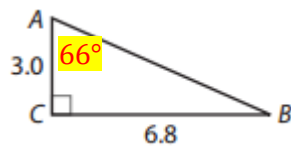
Find  $\angle B$ .



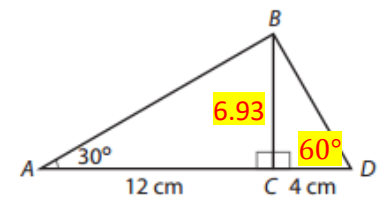
13.  $\angle U$  and  $\angle W$



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.

$\cos 30^\circ \approx 0.866$

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

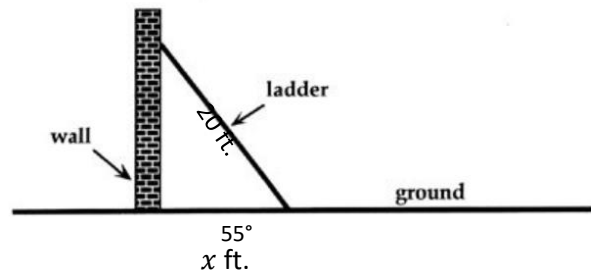
$\sin 64^\circ \approx 0.899$

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  $55^\circ$  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?

70°

2. From the top of a 108 ft lighthouse, the angle of depression of a boat at sea is  $27^\circ$ . Find the horizontal distance from the boat to the base of the lighthouse.

212 ft.

3. You are flying a kite with 300 feet of string. The string makes a  $42^\circ$  angle with the ground. Find the height of the kite.

200.7 ft.

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  $60^\circ$  and no greater than  $75^\circ$  in order to be safe, how far away should the painter place the ladder from the house?

between 3.2 and 6.9 feet

5. A 10 foot pole casts a 30 foot shadow. What is the angle of inclination of the sun?

18°