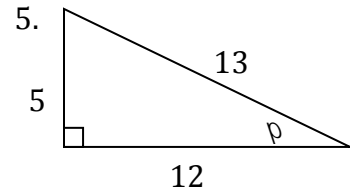
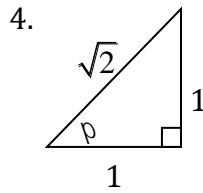
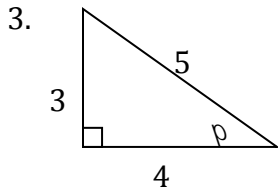


1. What type of triangle do trig ratios work for?

2. What does SOH-CAH-TOA stand for?

Find all trigonometric functions for the given triangles for angle q .



Evaluate using a calculator. Round to 3 decimal places.

6. $\sin 60^\circ$

7. $\cos 30^\circ$

8. $\tan 0^\circ$

9. $\tan 60^\circ$

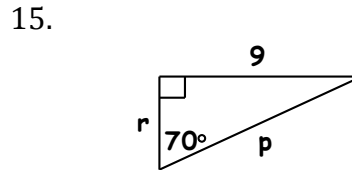
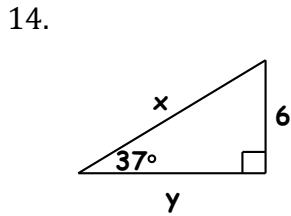
10. $\sin 23^\circ$

11. $\cos 59^\circ$

12. $\tan 87^\circ$

13. $\sin 4^\circ$

Set up and use trigonometric ratios to find the missing values.



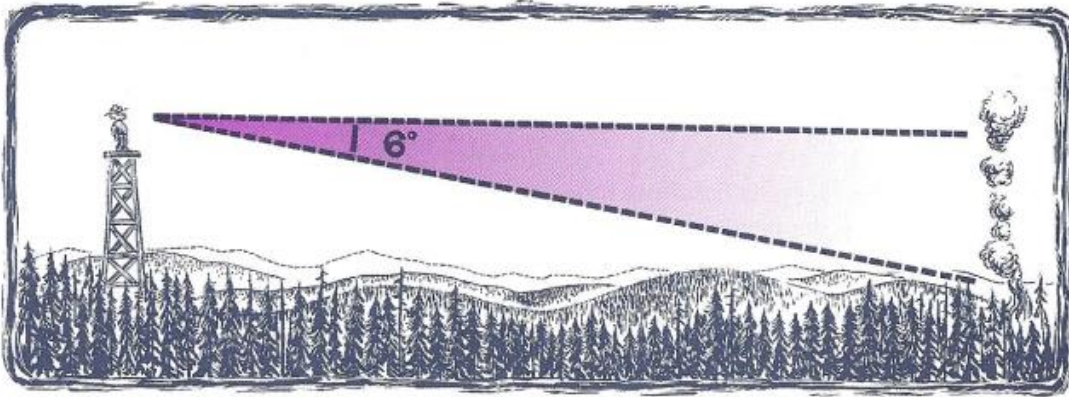
Draw a picture and use trigonometric ratios to solve.

16. The angle of elevation from the base of a waterslide to the top is about 13° . The slide extends horizontally (along the ground) about 58.2 meters. How tall is the slide?

Smokey the Bear

17. Smokey the Bear is atop a 100-foot tower, looking out over a fairly level area for careless people who might start fires. Suddenly, he sees a fire starting. He marks down the direction of the fire, but doesn't know how far away the fire is. To figure out this distance, Smokey grabs his handy protractor. Since he is high up on top of the tower, he has to look slightly downward toward the fire. He finds that his line of sight to the fire is at an angle of 6° below horizontal, as shown in the diagram below.

(Note: the diagram is not drawn to scale)



a.) How far is Smokey (up on the tower) from the fire on the ground?

b.) How far is the base of Smokey's tower from the fire?

Answer Key:

$$\sin q = \frac{3}{5}$$

$$\cos q = \frac{4}{5}$$

3. $\tan q = \frac{3}{4}$

$$\csc q = \frac{5}{3}$$

$$\sec q = \frac{5}{4}$$

$$\cot q = \frac{4}{3}$$

7. $\frac{\sqrt{3}}{2}$

9. $\sqrt{3}$

11. .515

15. $p \gg 9.6$
 $r \gg 3.275$

17. a. 956.7 ft