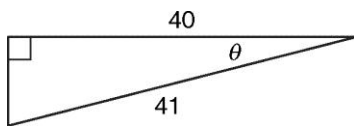
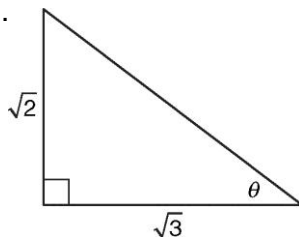


Find the values of the 6 trigonometric functions for θ . Give answers in simplest form.

1.

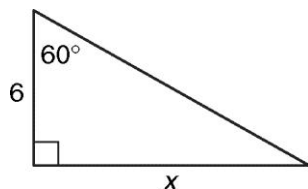


2.

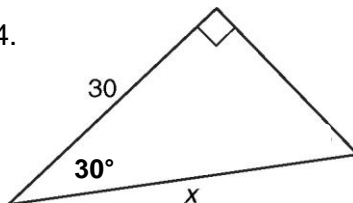


Use a trigonometric function to find the value of x , in simplest form.

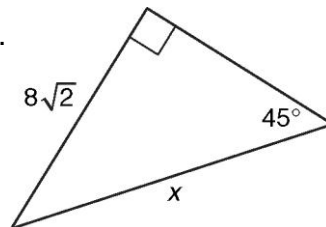
3.



4.



5.

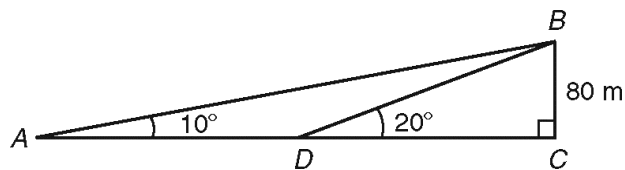


Solve each problem.

6. A water slide is 26 feet high. The angle between the slide and the water is 33.5° . What is the length of the slide to the nearest foot?

7. A surveyor stands 150 feet from the base of a viaduct and measures the angle of elevation to be 46.2° . His eye level is 6 feet above the ground. What is the height of the viaduct to the nearest foot?

8. A ship is headed directly toward a coastline formed by a vertical cliff (\overline{BC}) that is 80 meters high. At point A , from the ship, the measure of the angle of elevation to the top of the cliff (B) is 10° . A few minutes later, at point D , the measure of the angle of elevation to the top of the cliff has increased to 20° .



Determine the distance between the sightings to the nearest meter.