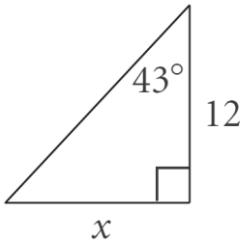
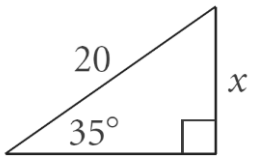
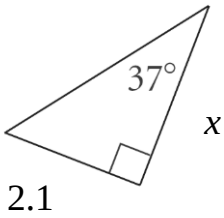
Name:_____

II. RIGHT TRIANGLE TRIGONOMETRY

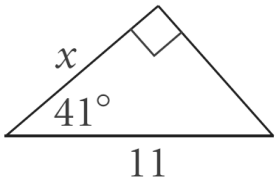
Find the value of x to the nearest tenth.

1. 

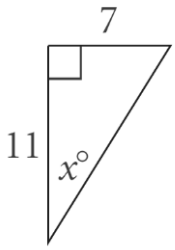
2. 

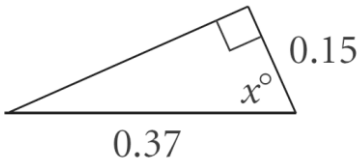
3. 

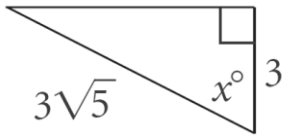
2.1

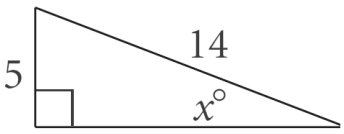
4. 

Find the value of x to the nearest degree.

5. 

6. 

7. 

8. 

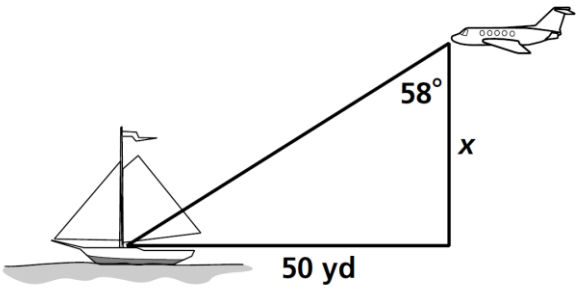
Find each missing value to the nearest tenth.

9. $\tan\theta = 3.5$

10. $\tan 25° = x$

11. $\cos 30° = x$

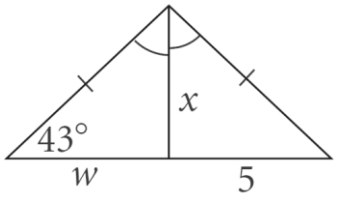
12. $\sin\theta = 0.5$

13. 

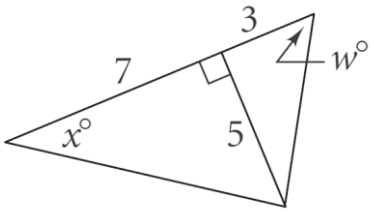
14. 

Find the value of w, then x. Round lengths of segments to the nearest tenth. Round angle measures to the nearest degree.

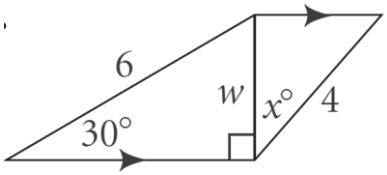
18.



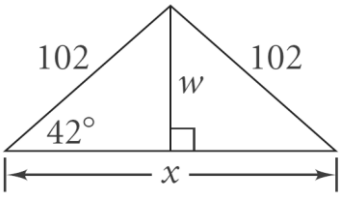
19.



20.



21.



22. An escalator in the subway system of St. Petersburg, Russia, has a vertical rise of 195 ft., and rises at an angle of 10.4°. How long is the escalator? Round your answer to the nearest foot.

23. Joe looks out from the crown of the Statue of Liberty approximately 250 ft above ground. He sights a ship coming into New York harbor and measures the angle of depression as 18°. Find the distance from the base of the statue to the ship to the nearest foot.

24. The world' tallest unsupported flagpole is a 282-ft-tall steel pole in Surrey, British Columbia. The shortest shadow cast by the pole during the year is 137 ft long. To the nearest degree, what is the angle of elevation of the sun when the shortest shadow is cast?

25. The Americans with Disabilities Act states that wheelchair ramps can have a slope no greater than $\frac{1}{12}$. Find the angle of elevation of a ramp with this slope. Round your answers to the nearest tenth.

26. A person standing 30 ft. from a flagpole can see the top of the pole at a 35° angle of elevation. The person's eye level is 5 ft from the ground. Find the height of the flagpole to the nearest foot.