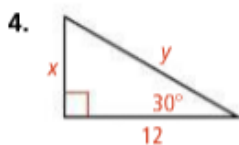
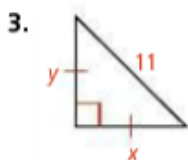
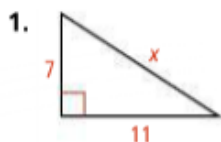


Do you know HOW?

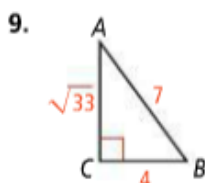
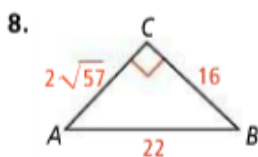
Algebra Find the value of each variable. Express your answer in simplest radical form.



Given the following triangle side lengths, identify the triangle as *acute*, *right*, or *obtuse*.

- 5. 9 cm, 10 cm, 12 cm
- 6. 8 m, 15 m, 17 m
- 7. 5 in., 6 in., 10 in.

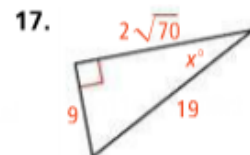
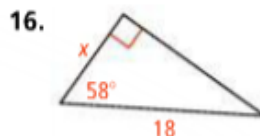
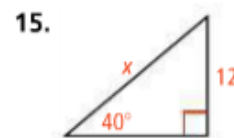
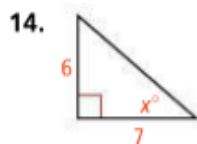
Express $\sin B$, $\cos B$, and $\tan B$ as ratios.



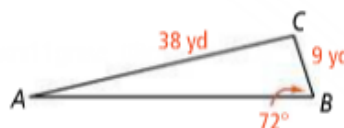
Find each missing value to the nearest tenth.

- 10. $\tan \square^\circ = 1.11$
- 11. $\sin 34^\circ = \frac{5}{\square}$
- 12. $\cos \square^\circ = \frac{12}{15}$
- 13. A woman stands 15 ft from a statue. She looks up at an angle of 60° to see the top of the statue. Her eye level is 5 ft above the ground. How tall is the statue to the nearest foot?

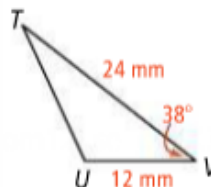
Find the value of x . Round lengths to the nearest tenth and angle measures to the nearest degree.



18. Find the $m\angle A$ to the nearest tenth.



19. Find TU to the nearest tenth.



- 20. In $\triangle KLP$, $k = 13$ mi, $\ell = 10$ mi, and $p = 8$ mi. Find $m\angle K$ to the nearest tenth.
- 21. In $\triangle ABC$, $a = 8$, $b = 10$, and $m\angle B = 120$. Find the $m\angle C$ to the nearest tenth.

Do you UNDERSTAND?

- 22. **Writing** Explain why $\sin x^\circ = \cos (90 - x)^\circ$. Include a diagram with your explanation.
- 23. **Reasoning** Suppose that you know all three angle measures of a triangle. Can you use Law of Sines or Law of Cosines to find the side lengths? Explain.
- 24. **Reasoning** If you know the measures of both acute angles of a right triangle, can you determine the