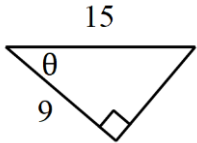


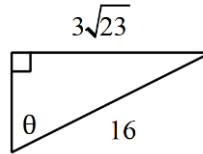
Name _____ Date _____ Period _____

Find the value of the trigonometric ratio indicated.

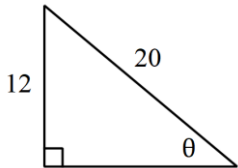
1. $\cos \theta$



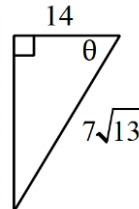
2. $\sin \theta$



3. $\tan \theta$



4. $\sec \theta$



Find the value of each. Round your answer to the nearest ten-thousandth.

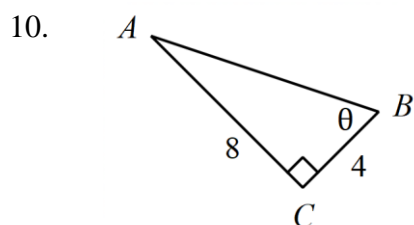
5. $\tan 80^\circ$

6. $\cos 25^\circ$

7. $\csc 46^\circ$

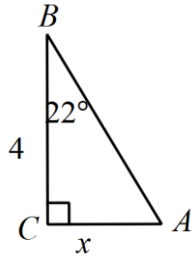
8. $\sec 27^\circ$

9. $\cot 10^\circ$

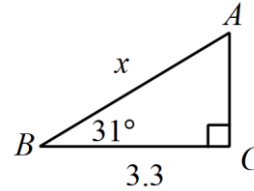
Find the measure of each angle indicated. Using right triangle trigonometry. Round to the nearest tenth.

Find the measure of each side indicated. Using right triangle trigonometry. Round to the nearest tenth.

11.

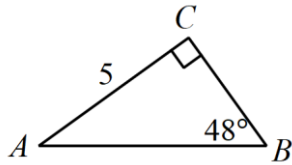


12.



Solve each triangle using right triangle trigonometry. Round to the nearest tenth.

13.

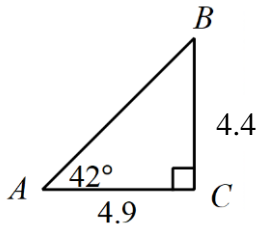


$m\angle A = \underline{\hspace{2cm}}$ $a = \underline{\hspace{2cm}}$

$m\angle B = \underline{\hspace{2cm}}$ $b = \underline{\hspace{2cm}}$

$m\angle C = \underline{\hspace{2cm}}$ $c = \underline{\hspace{2cm}}$

14.

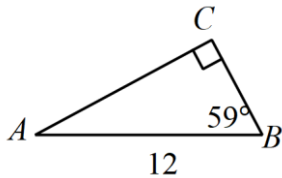


$m\angle A = \underline{\hspace{2cm}}$ $a = \underline{\hspace{2cm}}$

$m\angle B = \underline{\hspace{2cm}}$ $b = \underline{\hspace{2cm}}$

$m\angle C = \underline{\hspace{2cm}}$ $c = \underline{\hspace{2cm}}$

15.



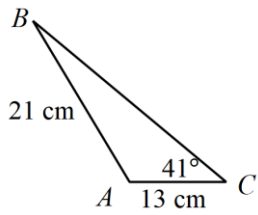
$m\angle A = \underline{\hspace{2cm}}$ $a = \underline{\hspace{2cm}}$

$m\angle B = \underline{\hspace{2cm}}$ $b = \underline{\hspace{2cm}}$

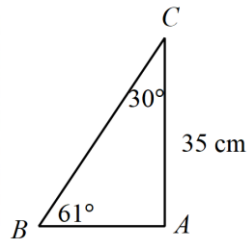
$m\angle C = \underline{\hspace{2cm}}$ $c = \underline{\hspace{2cm}}$

Find each measurement indicated. Round your answer to the nearest tenth. Use the Law of Sines.

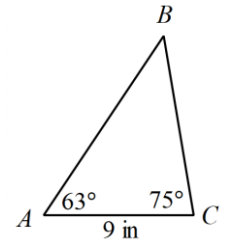
16. Find $m\angle B$.



17. Find \overline{AB} .

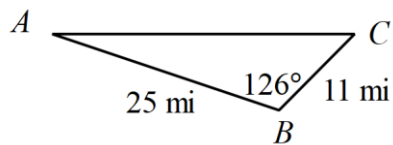


18. Find \overline{BC} .

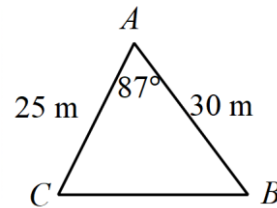


Find each measurement indicated. Round your answer to the nearest tenth. Use the Law of Cosines.

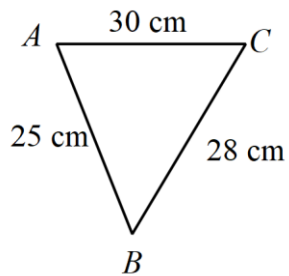
19. Find \overline{AC} .



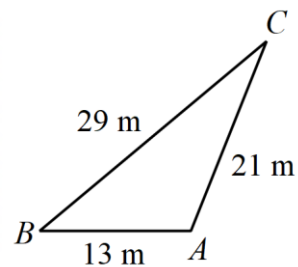
20. Find \overline{BC} .



21. Find $m\angle B$.

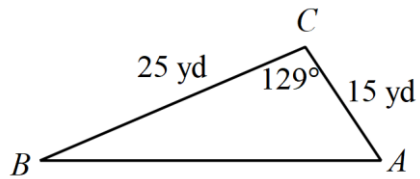


22. Find $m\angle C$.



Solve each triangle. Round your answer to the nearest tenth.

23.

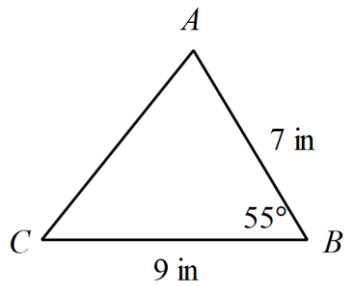


$$m\angle A = \underline{\hspace{2cm}} \quad a = \underline{\hspace{2cm}}$$

$$m\angle B = \underline{\hspace{2cm}} \quad b = \underline{\hspace{2cm}}$$

$$m\angle C = \underline{\hspace{2cm}} \quad c = \underline{\hspace{2cm}}$$

24.

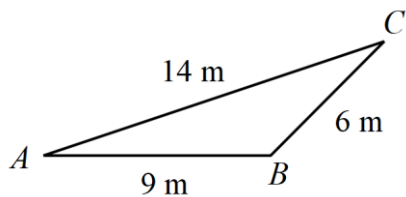


$$m\angle A = \underline{\hspace{2cm}} \quad a = \underline{\hspace{2cm}}$$

$$m\angle B = \underline{\hspace{2cm}} \quad b = \underline{\hspace{2cm}}$$

$$m\angle C = \underline{\hspace{2cm}} \quad c = \underline{\hspace{2cm}}$$

25.



$$m\angle A = \underline{\hspace{2cm}} \quad a = \underline{\hspace{2cm}}$$

$$m\angle B = \underline{\hspace{2cm}} \quad b = \underline{\hspace{2cm}}$$

$$m\angle C = \underline{\hspace{2cm}} \quad c = \underline{\hspace{2cm}}$$

Solve each of the following stories. Be sure to define your variable, draw a picture, and show your work.

26. Mikey is looking up at John who is on the top of the cliff. The angle of elevation from Mikey to John is 28° . The cliff is 25 feet tall. How far away from the bottom of the cliff is Mikey to the nearest tenth?

27. To find the distance between two small towns, Moroni and Wales, an electronic distance measuring instrument is placed on a hill from which both towns are visible. The instrument measured the distance to Moroni as 4.1 miles and the distance to Wales as 4.5 miles. The angle between the two lines of sight is 37° . What is the distance between the two towns to the nearest tenth of a mile?

28. When you plant a tree, you need to support it against the wind. You do this by tying a rope to the tree and staking it to the ground. You then tie another rope to the tree at the same spot but stake it to the ground on the opposite side of the first stake. The stakes are 11 feet apart. If the angle of elevation from the ground to where the rope is tied to the tree is 32° and 56° , how far up the tree are the ropes tied?

29. Ashley and Bob are walking toward a building and they are 500 feet apart from each other with Bob is directly West of Ashley. The bearing of Bob to the building is $N 20^\circ E$ and the bearing of Ashley to the building is $N 10^\circ W$. How many feet do each of them have to walk to get to the building?