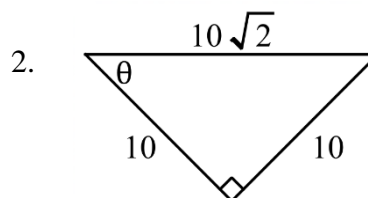
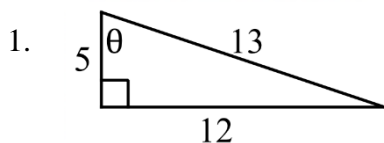


Name _____ Date _____ Period _____

Find the exact values of $\sin\theta$, $\cos\theta$, $\tan\theta$, $\csc\theta$, $\sec\theta$, $\cot\theta$. Put a **STAR** next to angle θ . Label your sides as opposite, adjacent, and hypotenuse.



$\sin \theta = \underline{\hspace{2cm}}$

$\csc \theta = \underline{\hspace{2cm}}$

$\sin \theta = \underline{\hspace{2cm}}$

$\csc \theta = \underline{\hspace{2cm}}$

$\cos \theta = \underline{\hspace{2cm}}$

$\sec \theta = \underline{\hspace{2cm}}$

$\cos \theta = \underline{\hspace{2cm}}$

$\sec \theta = \underline{\hspace{2cm}}$

$\tan \theta = \underline{\hspace{2cm}}$

$\cot \theta = \underline{\hspace{2cm}}$

$\tan \theta = \underline{\hspace{2cm}}$

$\cot \theta = \underline{\hspace{2cm}}$

Find the value of each. Round your answers to the nearest ten-thousandth (4 decimal places).

3. $\cos 43^\circ$

4. $\tan 56^\circ$

5. $\sin 65^\circ$

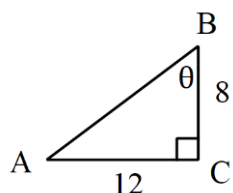
6. $\cot 80^\circ$

7. $\sec 30^\circ$

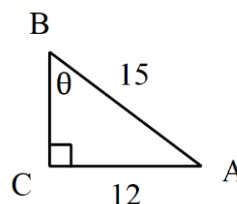
8. $\csc 70^\circ$

Find the measure of each angle indicated. Round to the nearest tenth.

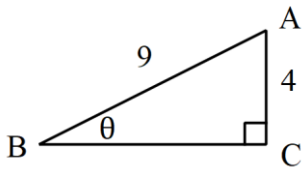
9.



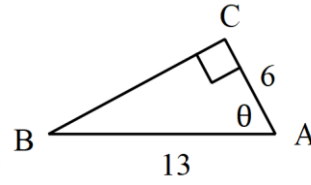
10.



11.

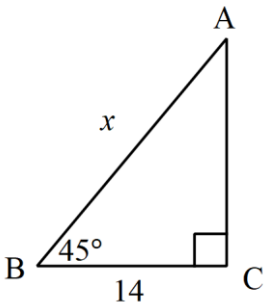


12.

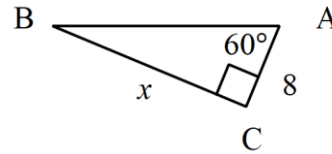


Find the measure of each side indicated. Round to the nearest tenth.

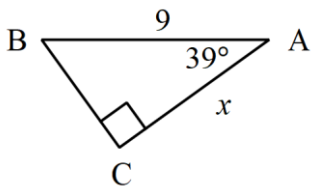
13.



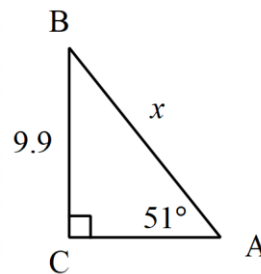
14.



15.

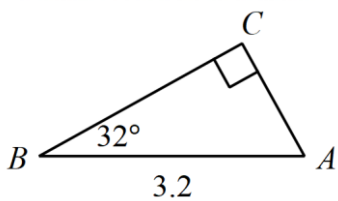


16.



Solve each triangle. Round answers to the nearest tenth.

17.

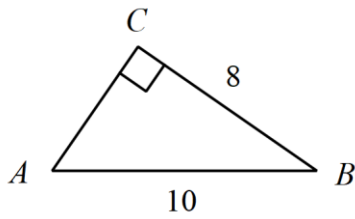


$$m\angle A = \underline{\hspace{2cm}} \quad a = \underline{\hspace{2cm}}$$

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

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

18.



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

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

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

Solve. Draw a diagram and show all your work. Round all answers to the nearest tenth if necessary.

19. A ladder placed against a wall such that it reaches the top of the wall of height 6 meters and the ladder is inclined at an angle of 60° . Find how far the ladder is from the foot of a wall.

20. A string of a kite is 100 feet long and the angle of elevation of the string with the ground is 55° . Find the height of the kite, assuming that there is no slack in the string.

21. From the top of the tower, a man finds that the angle of depression of a car on the ground is 30° . If the car is at a distance of 40 feet from the tower, find the height of the tower.

Factor each completely.

22. $k^2 + k - 6$

23. $3n^2 + 17n + 20$