

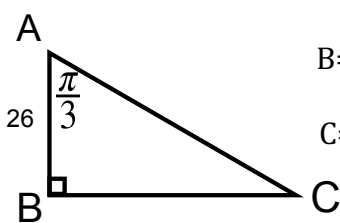
Assume θ is an acute angle in a right triangle; evaluate the 5 remaining trigonometric functions.

1. $\sin \theta = \frac{3}{6}$

2. $\cot \theta = \frac{11\sqrt{3}}{11}$

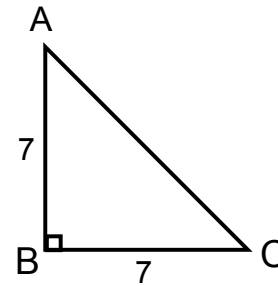
Solve each right triangle. Find the angles in radians and leave your answers as exact values.

3.



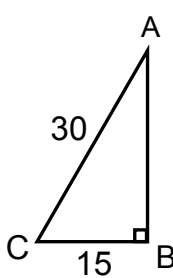
A= _____ a= _____
B= _____ b= _____
C= _____ c= _____

4.



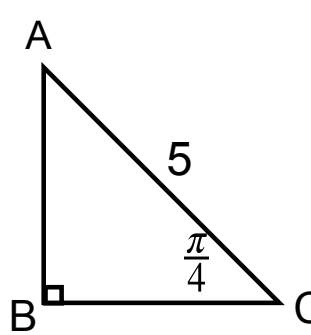
A= _____ a= _____
B= _____ b= _____
C= _____ c= _____

5.



A= _____ a= _____
B= _____ b= _____
C= _____ c= _____

6.



A= _____ a= _____
B= _____ b= _____
C= _____ c= _____

7. Right $\triangle PQR$ with $\overline{PQ} \perp \overline{PR}$, $QR = 47$ and $m\angle Q = \frac{\pi}{3}$.

P= _____ p= _____
Q= _____ q= _____
R= _____ r= _____

Use a calculator to evaluate the following expressions. (Hint: check your mode). Round your answer to the nearest thousandth (3 decimal places).

8. $\sin 74^\circ$

9. $\sin 74$

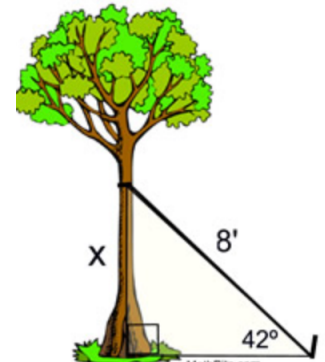
10. $\tan \frac{\pi}{12}$

11. $\csc 19^\circ$

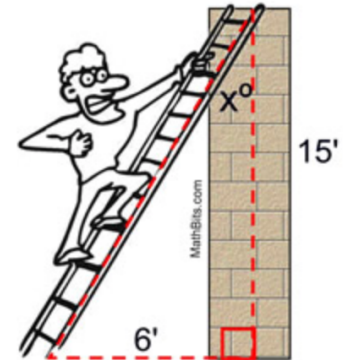
12. $\cot \frac{\pi}{8}$

13. $\sec 30^\circ$

14. A nursery plants a new tree and attaches a guy wire to help support the tree while its roots take hold. An eight-foot wire is attached to the tree and to a stake in the ground. From the stake in the ground, the angle of elevation of the connection with the tree is 42 degrees. Find to the nearest tenth of a foot, the height of the connection point on the tree.

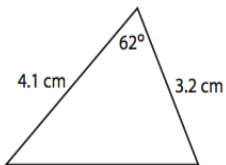


15. A ladder leans against a brick wall. The foot of the ladder is 6 feet from the wall. The ladder reaches a height of 15 feet on the wall. Find to the nearest degree, the angle the ladder makes with the wall.

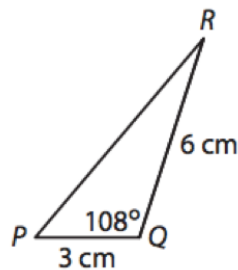


Find the area of each triangle to the nearest tenth

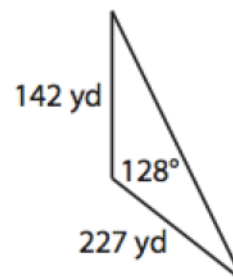
16.



17.



18.



Review: Evaluate the following without a calculator

19. $\csc \frac{\pi}{3}$

20. $\tan \frac{5\pi}{6}$

21. $\sec \frac{7\pi}{4}$