

Find each value. Round off to 4 decimal places

1. $\sin 218^\circ 52' =$

2. $\cot 52^\circ 18' =$

3. $\csc(3^\circ) =$

Find each angle θ , in standard position, correct to the nearest minute where $0^\circ \leq \theta \leq 90^\circ$.

4. $\tan \theta = 2.2317$

5. $\sec \theta = 3.0174$

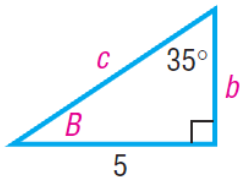
Find each angle θ , in standard position, correct to the nearest minute where $0^\circ \leq \theta \leq 360^\circ$.

6. $\cos \theta = -0.1833$

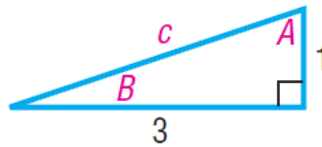
7. $\cot \theta = 0.5337$

In problems 8 and 9, solve each triangle. Round angles to the nearest minute and sides to the nearest tenth.

8.



9.



In problems 10-11, s denotes the length of the arc of a circle of radius r subtended by the central angle θ . Find the missing quantity. Round answers to three decimal places.

10. $r = 22 \text{ feet}$, $\theta = \frac{1}{3} \text{ radians}$, $s = ?$

11. $r = 56 \text{ cm}$, $\theta = 37^\circ$, $s = ?$

In problems 12-13, A denotes the area of the sector of a circle of radius r formed by the central angle θ . Find the missing quantity. Round answers to three decimal places.

12. $r = 29 \text{ feet}$, $\theta = 160^\circ$, $A = ?$

13. $r = 8 \text{ feet}$, $\theta = 4 \text{ radians}$, $A = ?$

14. Find the length of the arc subtended by a central angle of 135° on a circle of radius 4 meters. What is the area of the sector?

15. A neighborhood carnival has a merry-go-round whose radius is 25 feet. If the time for one revolution is 30 seconds, how fast is the merry-go-round going in miles per hour?