Trig-Precalculus Quiz 4.1–4.2 Review

ALL SUPPORTING WORK MUST BE SHOWN TO RECEIVE FULL CREDIT

Solve the problem.

1) From a distance of 1201 feet from a spotlight, the angle of elevation to a cloud base is 40°. Find the height of the cloud base to the nearest foot.

2) A wheel with a 36-inch radius is marked at two points on the rim. The distance between the marks along the wheel is found to be 3 inches. What is the angle (to the nearest tenth of a degree) between the radii to the two marks?

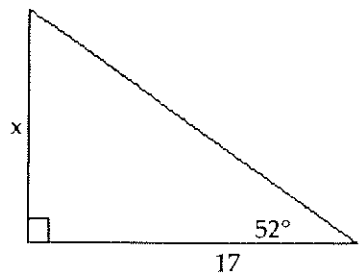
Solve the equation.

3) Solve $\sin\theta = \frac{\sqrt{3}}{2}$ for θ, where $0 \le \theta \le \frac{\pi}{2}$.

4) Solve $\cot\theta = \sqrt{3}$ for θ, where $0° \le \theta \le 90°$

Solve for x. Round your answer to 2 decimal places.

5)



Use the arc length formula and the given information to find the indicated quantity.

6) $s = 6.9$ ft, $\theta = \frac{\pi}{6}$ rad; find r

7) $s = 10$ cm, $\theta = 30°$; find r

Give the exact value.

8) $\sin 60°$

9) $\csc\frac{\pi}{4}$

Convert from degrees to radians. ~~**Use the value of π found on a calculator and round answers to four decimal places, as needed.**~~

10) 570°

Convert the angle to degrees, minutes, and seconds.

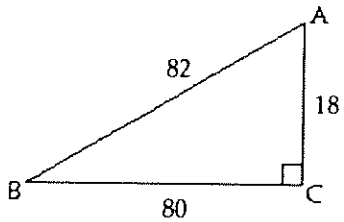
11) 63.98°

Convert the radian measure to degree measure. ~~Use the value of π found on a calculator and round answers to two decimal places.~~

12) $\frac{9\pi}{4}$

Find the exact values of the indicated trigonometric functions. Write fractions in lowest terms.

13)



Find cos B and cot B.

Convert the angle to decimal degrees and round to the nearest hundredth of a degree.

14) 160°33'21"

Assume that θ is an acute angle in a right triangle satisfying the given conditions. Evaluate the indicated trigonometric function.

15) $\sec\theta = \frac{5}{4}$; $\sin\theta$

1) 1008 feet
2) 4.8°
3) $\frac{\pi}{3}$
4) 30°
5) 21.76
6) $\frac{41.4}{\pi}$ ft
7) $\frac{60}{\pi}$ cm
8) $\frac{\sqrt{3}}{2}$
9) $\sqrt{2}$
10) $\frac{19\pi}{6}$
11) 63°58'48"
12) 405°
13) $\cos B = \frac{40}{41}$; $\cot B = \frac{40}{9}$
14) 160.56
15) $\frac{3}{5}$