

Non- Graphing Calculator

Sketch the angle. Find one positive angle and one negative angle that are coterminal with each angle.

1. 70°

2. $-\frac{2\pi}{5}$

3. Given the point $P(3, -1)$. Find the values of the six trigonometric functions of an angle in standard position if the given point lies on its terminal side.

For questions 4 and 5, find the values of the remaining five trigonometric functions of θ .

4. $\cos \theta = \frac{3}{5}; \tan \theta < 0$

5. $\sin \theta = -\frac{2}{3}; \tan \theta > 0$

For questions 6 – 15, find each exact value.

6. $\sin\left(\frac{5\pi}{6}\right)$

7. $\cos\left(\frac{5\pi}{4}\right)$

8. $\tan\left(-\frac{3\pi}{4}\right)$

9. $\csc 270^\circ$

10. $\cos\left(-\frac{11\pi}{6}\right)$

11. $\tan\left(-\frac{5\pi}{3}\right)$

12. $\cos 180^\circ$

13. $\tan\left(\frac{3\pi}{2}\right)$

14. $\cos\left(-\frac{7\pi}{2}\right)$

15. $\cot(-90^\circ)$

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16. Convert from DMS to decimal form: $38^{\circ}23'36''$

17. Convert from decimal form to degrees: 59.354° .

18. The radius of a car wheel is 15 inches. How many revolutions per minute is the wheel making when the car is traveling at 60 mph.

Evaluate using a calculator.

19. $\sin 47^{\circ}$

20. $\csc\left(\frac{\pi}{10}\right)$

21. Given $\theta = -145^{\circ}$. Change to radian measure in terms of π .

22. Given $\theta = -1$ radian. Change to degree measure.

For questions 23 and 24, find the measure of the intercepted arc in terms of π in a circle of diameter 30 inches with the given central angle.

23. $\frac{\pi}{24}$

24. 110°

25. The measure of an arc is 10 cm. Find the degree measure to the nearest tenth of the central angle it subtends in a circle of radius 16 cm.

26. To measure the width of a river, a surveyor starts at point A on one bank and walks 75 feet down the river to point B . He then measures the angle ABC to be $21^{\circ}37'15''$. Estimate the width of the river to the nearest foot.

