

Properties of the Trigonometric
Functions

1. Use the fact that the trigonometric functions are periodic to find the exact value of each expression. Do not use a calculator.

(Similar to p.136 #11-26)

$$\cos 570^\circ$$

2. Use the fact that the trigonometric functions are periodic to find the exact value of each expression. Do not use a calculator.

(Similar to p.136 #11-26)

$$\csc \frac{11\pi}{4}$$

3. Use the fact that the trigonometric functions are periodic to find the exact value of each expression. Do not use a calculator.

(Similar to p.136 #11-26)

$$\cot \frac{23\pi}{6}$$

4. Name the quadrant in which the angle θ lies.

(Similar to p.136 #27-34)

$$\sin \theta < 0, \quad \cos \theta < 0$$

5. Name the quadrant in which the angle θ lies.

(Similar to p.136 #27-34)

$$\sec \theta > 0, \quad \tan \theta < 0$$

6. $\sin \theta$ and $\cos \theta$ are given. Find the exact value of each of the four remaining trigonometric functions.

(Similar to p.136 #35-42)

$$\sin \theta = \frac{-\sqrt{22}}{5}, \quad \cos \theta = \frac{-\sqrt{3}}{5}$$

7. Find the exact value of each of the remaining trigonometric functions of θ .

(Similar to p.136 #43-57)

$$\cos \theta = \frac{5}{13}, \quad \theta \text{ in quadrant IV}$$

8. Find the exact value of each of the remaining trigonometric functions of θ .

(Similar to p.136 #43-57)

$$\sin \theta = \frac{-1}{6}, \quad \cot \theta < 0$$

9. Find the exact value of each of the remaining trigonometric functions of θ .

(Similar to p.136 #43-57)

$$\sec \theta = -5, \quad \csc \theta > 0$$

10. Use the even-odd properties to find the exact value of each expression. Do not use a calculator.

(Similar to p.137 #59-76)

$$\cos(-60^\circ)$$

11. Use the even-odd properties to find the exact value of each expression. Do not use a calculator.

(Similar to p.137 #59-76)

$$\tan(-120^\circ)$$

12. Use the even-odd properties to find the exact value of each expression. Do not use a calculator.
(Similar to p.137 #59-76)

$$\csc\left(-\frac{2\pi}{3}\right)$$

13. Use properties of the trigonometric functions to find the exact value of each expression. Do not use a calculator.
(Similar to p.137 #77-88)

$$\csc^2 40^\circ - \cot^2 40^\circ$$

14. Use properties of the trigonometric functions to find the exact value of each expression. Do not use a calculator.
(Similar to p.137 #77-88)

$$\cos 25^\circ \sec 25^\circ$$

15. Use properties of the trigonometric functions to find the exact value of each expression. Do not use a calculator.
(Similar to p.137 #77-88)

$$\tan 220^\circ \cdot \cot 40^\circ$$

16. Use properties of the trigonometric functions to find the exact value of each expression. Do not use a calculator.
(Similar to p.137 #77-88)

$$\frac{\cos 50^\circ}{\sin(-310^\circ)} + \cot(-50^\circ)$$