Trigonometric Functions: Unit Circle Approach

1. P = (x, y) is the point on the unit circle that corresponds to a real number t. Find the exact values of the six trigonometric functions of t.

$$\left(\frac{-1}{4}, \frac{\sqrt{15}}{4}\right)$$

2. P = (x, y) is the point on the unit circle that corresponds to a real number t. Find the exact values of the six trigonometric functions of t.

$$\left(\frac{-2\sqrt{2}}{3}, \frac{-1}{3}\right)$$

3. Find the exact value. Do not use a calculator.

$$\sin(15\pi)$$

4. Find the exact value. Do not use a calculator.

$$\cot\frac{9\pi}{2}$$

5. Find the exact value. Do not use a calculator.

$$\sec(-5\pi)$$

6. Find the exact value of each expression. Do not use a calculator.

$$\sec 45^\circ \sin 60^\circ$$

7. Find the exact value of each expression. Do not use a calculator.

$$5\sec\frac{\pi}{6}+\cot\frac{5\pi}{4}$$

8. Find the exact values of the six trigonometric functions of the given angle. If any are not defined, say "not defined". Do not use a calculator.

$$\frac{7\pi}{6}$$

9. Find the exact values of the six trigonometric functions of the given angle. If any are not defined, say "not defined". Do not use a calculator.

$$420^\circ$$

10. Find the exact values of the six trigonometric functions of the given angle. If any are not defined, say "not defined". Do not use a calculator.

$$\frac{-8\pi}{3}$$

11. Use a calculator to find the approximate value of each expression rounded to two decimal places.

$$\cos 37^\circ$$

12. Use a calculator to find the approximate value of each expression rounded to two decimal places.

$$\csc 53^\circ$$

13. Use a calculator to find the approximate value of each expression rounded to two decimal places.

$$\cot \frac{7\pi}{12}$$

14. A point on the terminal side of an angle θ in standard position is given. Find the exact value of each of the six trigonometric functions of θ.

$$(-12,-5)$$

15. A point on the terminal side of an angle θ in standard position is given. Find the exact value of each of the six trigonometric functions of θ.

$$(-3,5)$$

16. A point on the terminal side of an angle θ in standard position is given. Find the exact value of each of the six trigonometric functions of θ.

$$\left(\frac{1}{5}, \frac{-2}{3}\right)$$