

Name _____

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

The point P on the unit circle that corresponds to a real number t is given. Find the indicated trigonometric function.

1) $\left(\frac{4}{9}, \frac{\sqrt{65}}{9}\right)$ Find $\sin t$. 1) _____
 A) $\frac{\sqrt{65}}{9}$ B) $\frac{\sqrt{65}}{4}$ C) $\frac{4}{9}$ D) $\frac{4\sqrt{65}}{65}$

2) $\left(-\frac{\sqrt{7}}{4}, \frac{3}{4}\right)$ Find $\cot t$. 2) _____
 A) $-\frac{\sqrt{7}}{3}$ B) $\frac{3}{4}$ C) $-\frac{4}{3}$ D) $\frac{\sqrt{7}}{4}$

Find the reference angle of the given angle.

3) 113° 3) _____
 A) 23° B) 77° C) 33° D) 67°

Use the reference angle to find the exact value of the expression. Do not use a calculator.

4) $\sin 495^\circ$ 4) _____
 A) $\frac{\sqrt{2}}{2}$ B) $-\frac{\sqrt{2}}{2}$ C) $\frac{1}{2}$ D) $-\frac{1}{2}$

5) $\sin \frac{5\pi}{3}$ 5) _____
 A) $-\frac{\sqrt{3}}{2}$ B) -1 C) $\frac{\sqrt{3}}{2}$ D) $-\frac{1}{2}$

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

6) $\sin 405^\circ$ 6) _____
 A) $-\frac{\sqrt{2}}{2}$ B) $\frac{\sqrt{2}}{2}$ C) $\frac{1}{2}$ D) $-\frac{1}{2}$

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

7) $\cos(-2\pi) + \sin\left(\frac{-3\pi}{2}\right)$ 7) _____
 A) 1 B) 2 C) 0 D) -2

Solve the problem.

- 8) What is the range of the cosine function? 8) _____
A) all real numbers greater than or equal to 1 or less than or equal to -1
B) all real numbers from -1 to 1, inclusive
C) all real numbers
D) all real numbers greater than or equal to 0
- 9) If $\sin \theta = -0.9$, find the value of $\sin \theta + \sin (\theta + 2\pi) + \sin (\theta + 4\pi)$. 9) _____
A) $-2.7 + 6\pi$ B) -0.9 C) -0.7 D) -2.7

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

The point P on the circle $x^2 + y^2 = r^2$ that is also on the terminal side of an angle θ in standard position is given. Find the indicated trigonometric function.

- 10) $(-4, -1)$ Find $\csc \theta$. 10) _____