

Classify the angle as acute, right, obtuse, or straight.

1) $\frac{3\pi}{4}$ 1) _____
A) straight B) acute C) obtuse D) right

2) π 2) _____
A) obtuse B) acute C) straight D) right

Find the radian measure of the central angle of a circle of radius r that intercepts an arc of length s .

3) $r = 1$ meter, $s = 2$ meters 3) _____
A) $\frac{1}{200}$ radians B) 20 radians C) 200 radians D) 2 radians

Convert the angle in degrees to radians. Express answer as a multiple of π .

4) 150° 4) _____
A) $\frac{2}{3}\pi$ radians B) $\frac{5\pi}{6}$ radians C) $\frac{6\pi}{7}$ radians D) $\frac{4\pi}{5}$ radians

Convert the angle in radians to degrees.

5) $-\frac{\pi}{5}$ 5) _____
A) $-\left(\frac{\pi}{5}\right)^\circ$ B) -1° C) $-36\pi^\circ$ D) -36°

Convert the angle in radians to degrees. Round to two decimal places.

6) 2π radians 6) _____
A) 360° B) 362° C) 359° D) 361°

7) 2 radians 7) _____
A) 113.67° B) -0.16° C) 114.59° D) 0.03°

Find a positive angle less than 360° or 2π that is coterminal with the given angle.

8) -84° 8) _____
A) 456° B) 276° C) 84° D) 96°

9) 639° 9) _____
A) 319.5° B) 279° C) 269° D) 459°

10) $\frac{11\pi}{5}$ 10) _____
A) $\frac{6\pi}{5}$ B) $\frac{\pi}{5}$ C) $-\frac{\pi}{5}$ D) $\frac{4\pi}{5}$

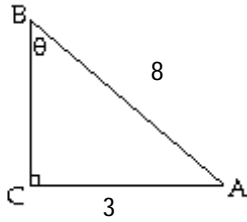
Find the length of the arc on a circle of radius r intercepted by a central angle θ . Round answer to two decimal places.

11) $r = 55$ inches, $\theta = 45^\circ$ 11) _____
A) 43.2 inches B) 44.49 inches C) 45.63 inches D) 41.35 inches

Use the Pythagorean Theorem to find the length of the missing side. Then find the indicated trigonometric function of the given angle. Give an exact answer with a rational denominator.

12) Find $\sin \theta$.

12) _____



- A) $\frac{3\sqrt{55}}{55}$ B) $\frac{8\sqrt{55}}{55}$ C) $\frac{\sqrt{55}}{8}$ D) $\frac{3}{8}$

θ is an acute angle and $\sin \theta$ and $\cos \theta$ are given. Use identities to find the indicated value.

13) $\sin \theta = -\frac{\sqrt{5}}{3}$, $\cos \theta = \frac{2}{3}$. Find $\cot \theta$.

13) _____

- A) $\frac{\sqrt{5}}{2}$ B) $\frac{-2\sqrt{5}}{5}$ C) $\frac{3}{2}$ D) $\frac{-3\sqrt{5}}{5}$

θ is an acute angle and $\sin \theta$ is given. Use a Pythagorean identity to find $\cos \theta$.

14) $\sin \theta = \frac{\sqrt{5}}{3}$

14) _____

- A) $\frac{2}{3}$ B) $\frac{3\sqrt{5}}{5}$ C) $\frac{\sqrt{5}}{2}$ D) $\frac{3}{2}$

Use an identity to find the value of the expression. Do not use a calculator.

15) $\sin 33^\circ \csc 33^\circ$

15) _____

- A) 33 B) 0 C) 1 D) $\sin^2 33^\circ$

16) $\tan 70^\circ - \frac{\sin 70^\circ}{\cos 70^\circ}$

16) _____

- A) 1 B) 0 C) Undefined D) 70

Find a cofunction with the same value as the given expression.

17) $\cos 64^\circ$

17) _____

- A) $\sec 64^\circ$ B) $\csc 26^\circ$ C) $\sin 64^\circ$ D) $\sin 26^\circ$

18) $\tan 23^\circ$

18) _____

- A) $\cot 23^\circ$ B) $\sec 23^\circ$ C) $\cot 113^\circ$ D) $\cot 67^\circ$

19) $\cos \frac{\pi}{8}$

19) _____

- A) $\sin \frac{\pi}{8}$ B) $\cos \frac{\pi}{8}$ C) $\cos \frac{3\pi}{8}$ D) $\sin \frac{3\pi}{8}$

A point on the terminal side of angle θ is given. Find the exact value of the indicated trigonometric function of θ .

20) (9, 12) Find $\cos \theta$.

20) _____

- A) $\frac{4}{5}$ B) $\frac{4}{3}$ C) $\frac{3}{5}$ D) $\frac{3}{4}$

21) (3, -2) Find $\sin \theta$.

A) -2

B) $\frac{\sqrt{13}}{3}$

C) $\frac{3\sqrt{13}}{13}$

D) $-\frac{2\sqrt{13}}{13}$

21) _____

Find the reference angle for the given angle.

22) 413°

A) 143°

B) 37°

C) 53°

D) 127°

22) _____

23) $\frac{9\pi}{8}$

A) $\frac{9\pi}{8}$

B) $\frac{7\pi}{8}$

C) $\frac{\pi}{16}$

D) $\frac{\pi}{8}$

23) _____

Find the exact value of the indicated trigonometric function of θ .

24) $\sec \theta = \frac{3}{2}$, θ in quadrant IV Find $\tan \theta$.

A) $-\frac{\sqrt{5}}{2}$

B) $-\frac{3}{2}$

C) $-\sqrt{5}$

D) $-\frac{\sqrt{5}}{3}$

24) _____

25) $\tan \theta = -\frac{8}{3}$, θ in quadrant II Find $\cos \theta$.

A) $-\frac{3\sqrt{73}}{73}$

B) $\frac{\sqrt{73}}{8}$

C) $-\frac{\sqrt{73}}{3}$

D) $\frac{3\sqrt{73}}{73}$

25) _____

26) $\cot \theta = -\frac{3}{2}$, $\cos \theta < 0$ Find $\csc \theta$.

A) $\frac{\sqrt{13}}{2}$

B) $\frac{3\sqrt{13}}{13}$

C) $-\frac{3\sqrt{13}}{13}$

D) $-\frac{\sqrt{13}}{3}$

26) _____

Solve the problem.

27) The height of the water, H , in feet, at a boat dock t hours after 7 A.M is given by

$E = 17 + 5.8 \cos \frac{\pi}{85}t$, where t is time measured in seconds. Find the period.

A) $\frac{1}{170}$

B) 170

C) $\frac{\pi}{170}$

D) 170π

27) _____

28) A radio transmission tower is 250 feet tall. How long should a guy wire be if it is to be attached 11 feet from the top and is to make an angle of 35° with the ground? Give your answer to the nearest tenth of a foot.

A) 291.8 feet

B) 416.7 feet

C) 305.2 feet

D) 435.9 feet

28) _____

Answer Key

Testname: REVIEW01

- 1) C
- 2) C
- 3) D
- 4) B
- 5) D
- 6) A
- 7) C
- 8) B
- 9) B
- 10) B
- 11) A
- 12) D
- 13) B
- 14) A
- 15) C
- 16) B
- 17) D
- 18) D
- 19) D
- 20) C
- 21) D
- 22) C
- 23) D
- 24) A
- 25) A
- 26) A
- 27) B
- 28) B