NEW HAMPSHIRE PRECALCULUS · UNIT 2 · 25 QUESTIONS

# Trigonometry — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

**1** **The value of sin 210° is**

A $-\frac{1}{2}$

B $\frac{1}{2}$

C $-\frac{\sqrt{3}}{2}$

D $\frac{\sqrt{3}}{2}$

Understand It with Pulse | Flag a mistake

**2** **The value of cos 120° is**

A $\frac{1}{2}$

B $-\frac{1}{2}$

C $\frac{\sqrt{3}}{2}$

D $-\frac{\sqrt{3}}{2}$

Understand It with Pulse | Flag a mistake

**3** **The value of tan 45° is**

A 0

B $\frac{1}{2}$

C 1

D $\sqrt{3}$

Understand It with Pulse | Flag a mistake

**4** **An angle of 150° in radians is**



A $\frac{5\pi}{6}$

B $\frac{2\pi}{3}$

C $\frac{3\pi}{4}$

D $\frac{5\pi}{3}$

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5 **An angle of $\frac{3\pi}{4}$ radians in degrees is**

A 120°

B 135°

C 150°

D 270°

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6 **The reference angle for 200° is**

A 20°

B 40°

C 160°

D 200°

Understand It with Pulse | Flag a mistake

**7** An angle coterminal with -30° between 0° and 360° is

- **A** 30°
- **B** 150°
- **C** 330°
- **D** 210°

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**8** If $\sin\theta = \frac{3}{5}$ and $\theta$ is in Quadrant I, then $\cos\theta$ is

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

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**9** If $\cos\theta = \frac{5}{13}$ and $\sin\theta = \frac{12}{13}$, then $\tan\theta$ is

- A $\frac{5}{12}$
- B $\frac{12}{5}$
- C $\frac{13}{12}$
- D $\frac{12}{13}$

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**10** The identity $\sin^2\theta + \cos^2\theta$ equals

- A 0
- B 1
- C 2
- D $\tan\theta$

Understand It with Pulse | Flag a mistake

**11** **The value of sec 60° is**

A $\frac{1}{2}$

B $\sqrt{3}$

C $\frac{2}{\sqrt{3}}$

D 2

Understand It with Pulse | Flag a mistake

**12** **The amplitude of y = 4 sin x is**



A 1

B 2

C 4

D 2π

Understand It with Pulse | Flag a mistake

**13** The period of $y = 2\cos(3x)$ is




A $2\pi$

B $\frac{2\pi}{3}$

C $\frac{\pi}{3}$

D $3\pi$

Understand It with Pulse | Flag a mistake

14 **For y = 2 cos x, the value of y when x = 0 is**

A 0

B 1

C 2

D -2

Understand It with Pulse | Flag a mistake

**15** **In a right triangle with opposite side 5 and hypotenuse 13, the sine of the angle is**



A $\frac{5}{12}$

B $\frac{12}{13}$

C $\frac{5}{13}$

D $\frac{13}{5}$

Understand It with Pulse | Flag a mistake

**16** The smallest nonnegative solution of $\sin x = \frac{1}{2}$ is



A $\frac{\pi}{3}$

B $\frac{5\pi}{6}$

C $\frac{\pi}{2}$

D $\frac{\pi}{6}$

Understand It with Pulse | Flag a mistake

**17** The value of $\sin^{-1}\frac{1}{2}$ is

- A $\frac{\pi}{6}$
- B $\frac{\pi}{3}$
- C $\frac{5\pi}{6}$
- D $-\frac{\pi}{6}$

Understand It with Pulse | Flag a mistake

**18** If $\sin\theta = \frac{3}{5}$ and $\cos\theta = \frac{4}{5}$, then $\sin 2\theta$ is

- A $\frac{7}{25}$
- B $\frac{12}{25}$
- C $\frac{24}{25}$
- D $\frac{9}{25}$

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**19** For a circle of radius 6 and central angle $\frac{\pi}{3}$, the arc length is

- A $\pi$
- B $2\pi$
- C $3\pi$
- D $6\pi$

Understand It with Pulse | Flag a mistake

**20** For a circle of radius 4 and central angle $\frac{\pi}{2}$, the sector area is

- A $4\pi$
- B $2\pi$
- C $8\pi$
- D $16\pi$

Understand It with Pulse | Flag a mistake

**21** **By the Law of Cosines, if a = 5, b = 6, and C = 90°, then c is**



A 11

B $\sqrt{61}$

C $\sqrt{11}$

D 61

Understand It with Pulse | Flag a mistake

**22** If $\tan\theta = \frac{3}{4}$, then $\cot\theta$ is

- **A** $\frac{3}{4}$
- **B** $\frac{4}{3}$
- **C** $-\frac{3}{4}$
- **D** 1

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**23** The value of cos 180° is ____.

ANSWER _____

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**24** The value of sin 90° is ____.

ANSWER _____

Understand It with Pulse | Flag a mistake

25 **In degrees, $\frac{\pi}{2}$ radians is ____.**

ANSWER

Understand It with Pulse | Flag a mistake

# ANSWER KEY

| | | | | | |
|---|---|---|---|---|---|
| **1.** | A | **10.** | B | **19.** | B |
| **2.** | B | **11.** | D | **20.** | A |
| **3.** | C | **12.** | C | **21.** | B |
| **4.** | A | **13.** | B | **22.** | B |
| **5.** | B | **14.** | C | **23.** | -1 |
| **6.** | A | **15.** | C | **24.** | 1 |
| **7.** | C | **16.** | D | **25.** | 90 |
| **8.** | A | **17.** | A | | |
| **9.** | B | **18.** | C | | |

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