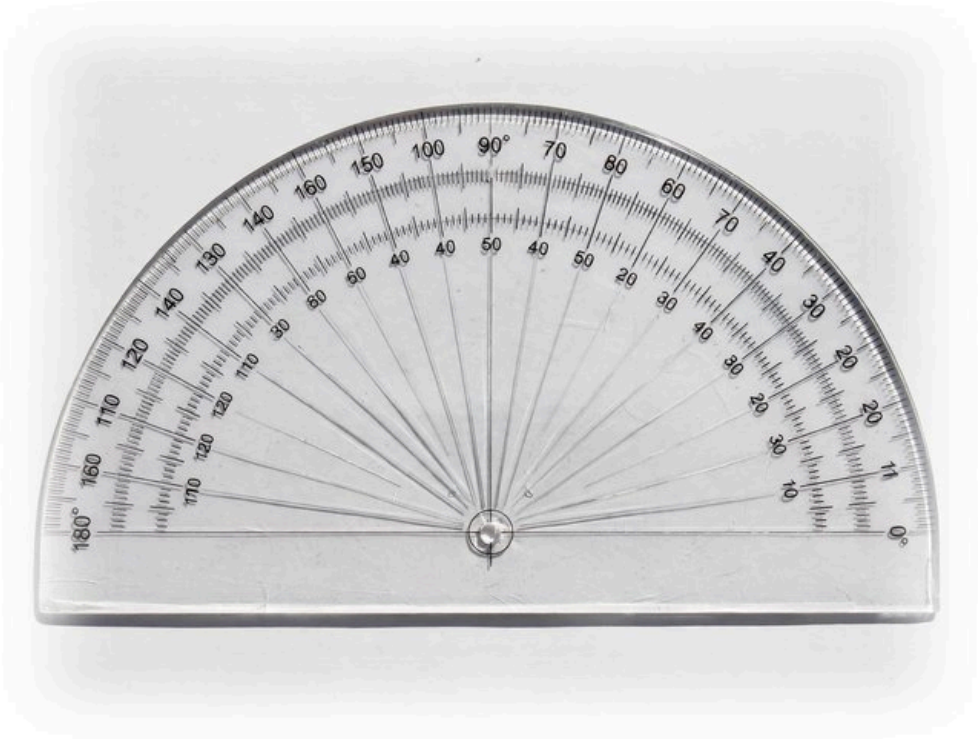
ARIZONA PRECALCULUS · UNIT 2 · 25 QUESTIONS

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 $\sin \frac{\pi}{6}$ is



A 1

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

C $\frac{1}{2}$

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

Understand It with Pulse | Flag a mistake

2 The value of $\cos \frac{2\pi}{3}$ is

A $\frac{1}{2}$

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

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

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

Understand It with Pulse | Flag a mistake

3 The value of $\tan \frac{\pi}{4}$ is

A 0

B 1

C $\frac{1}{\sqrt{3}}$

D $\sqrt{3}$

Understand It with Pulse | Flag a mistake

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

A $-\frac{4}{5}$

B $\frac{4}{5}$

C $\frac{5}{4}$

D $\frac{3}{4}$

Understand It with Pulse | Flag a mistake

5 The value of sin 210° is

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

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

C $\frac{1}{2}$

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

Understand It with Pulse | Flag a mistake

6 For y = 3sin 2x, the amplitude is



A π

B 6

C 3

D 2

Understand It with Pulse | Flag a mistake

7 **For y = 3sin 2x, the period is**

- **A** 2π
- **B** 3π
- **C** π
- **D** $\frac{\pi}{2}$

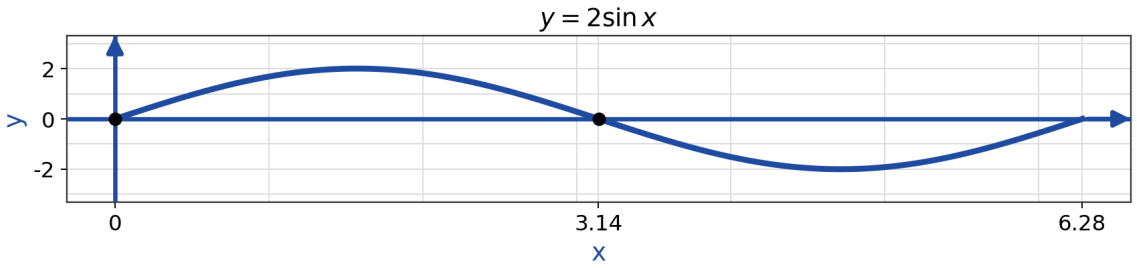
Understand It with Pulse | Flag a mistake

8 **For y = 2cos(x - $\frac{\pi}{3}$), the phase shift is**

- **A** 2 to the right
- **B** π to the right
- **C** $\frac{\pi}{3}$ to the left
- **D** $\frac{\pi}{3}$ to the right

Understand It with Pulse | Flag a mistake

9 **The graph shows y = 2sin x. The maximum value is**



A -2

B 1

C 0

D 2

Understand It with Pulse | Flag a mistake

10 The solutions of $\sin x = \frac{\sqrt{3}}{2}$ for $0 \leq x < 2\pi$ are

A $x = \frac{\pi}{3}, \frac{5\pi}{3}$

B $x = \frac{\pi}{3}, \frac{2\pi}{3}$

C $x = \frac{\pi}{6}, \frac{5\pi}{6}$

D $x = \frac{2\pi}{3}, \frac{4\pi}{3}$

Understand It with Pulse | Flag a mistake

11 The solutions of $\cos x = -\frac{1}{2}$ for $0 \leq x < 2\pi$ are



A $x = \frac{5\pi}{6}, \frac{7\pi}{6}$

B $x = \frac{\pi}{3}, \frac{5\pi}{3}$

C $x = \frac{2\pi}{3}, \frac{4\pi}{3}$

D $x = \frac{\pi}{3}, \frac{2\pi}{3}$

Understand It with Pulse | Flag a mistake

12 **The identity $1 + \tan^2 x$ equals**

A $\sec^2 x$

B 1

C $\sin^2 x$

D $\csc^2 x$

Understand It with Pulse | Flag a mistake

13 **The identity sin 2x equals**

A sin x + cos x

B 2cos x

C $\sin^2 x - \cos^2 x$

D 2sin x cos x

Understand It with Pulse | Flag a mistake

14 For y = cos 3x, the period is



A 3π

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

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

D 2π

Understand It with Pulse | Flag a mistake

15 For y = 4cos x - 1, the midline is

- **A** y = 1
- **B** y = -1
- **C** y = 4
- **D** y = 0

Understand It with Pulse | Flag a mistake

16 The value of arcsin $\frac{1}{2}$ in $[-\frac{\pi}{2}, \frac{\pi}{2}]$ is

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

Understand It with Pulse | Flag a mistake

17 In degrees, 120° in radians is

- **A** $\frac{3\pi}{4}$
- **B** $\frac{5\pi}{6}$
- **C** $\frac{2\pi}{3}$
- **D** $\frac{\pi}{3}$

Understand It with Pulse | Flag a mistake

18 In degrees, $\frac{5\pi}{6}$ radians is

- **A** 120°
- **B** 135°
- **C** 150°
- **D** 180°

Understand It with Pulse | Flag a mistake

19 **In a right triangle, opposite is 6 and hypotenuse is 10. The sine is**



A $\frac{6}{4}$

B $\frac{4}{5}$

C $\frac{5}{3}$

D $\frac{3}{5}$

Understand It with Pulse | Flag a mistake

20 **In a triangle, A = 30°, B = 60°, and side a = 10. Side b is**

- **A** 10
- **B** $10\sqrt{3}$
- **C** 20
- **D** $5\sqrt{3}$

Understand It with Pulse | Flag a mistake

21 **Two sides are 5 and 7 with included angle 60°. The third side² is**



A 24

B 109

C 39

D 74

Understand It with Pulse | Flag a mistake

22 If $\tan\theta = \frac{3}{4}$ and θ is in Quadrant I, then $\sin\theta$ is

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

Understand It with Pulse | Flag a mistake

23 The reference angle for 150° is

- A 60°
- B 50°
- C 30°
- D 150°

Understand It with Pulse | Flag a mistake

24 **The value of cos 2π is**

ANSWER

Understand It with Pulse | Flag a mistake

25 **The number of degrees in π radians is**

ANSWER

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. C
2. C
3. B
4. B
5. D
6. C
7. C
8. D
9. D
10. B
11. C
12. A
13. D
14. B
15. B
16. D
17. C
18. C
19. D
20. B
21. C
22. B
23. C
24. 1
25. 180

© 2026 Brett Robbins. All Rights Reserved.