ARKANSAS 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 **In degrees, π radians equals**



A 180

B 90

C 360

D 60

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2 **The value of sin 30° is**

- **A** 1
- **B** $\frac{1}{2}$
- **C** $\frac{\sqrt{3}}{2}$
- **D** $\frac{\sqrt{2}}{2}$

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3 **The value of cos 60° is**

- **A** 1
- **B** $\sqrt{3}$
- **C** $\frac{1}{2}$
- **D** 0

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4 **The value of tan 45° is**

A 0

B $\frac{1}{2}$

C $\sqrt{3}$

D 1

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5 In a right triangle, $\sin\theta = \frac{3}{5}$ and $\cos\theta = \frac{4}{5}$. Then $\tan\theta$ is



A $\frac{3}{4}$

B $\frac{4}{3}$

C $\frac{5}{3}$

D $\frac{5}{4}$

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6 **The period of y = sin(2x) is**

A 2π

B π

C π/2

D 4π

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7 **The amplitude of y = 4cos x is**

A 1

B 2

C 4

D 8

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8 The identity $\sin^2 \theta + \cos^2 \theta$ equals

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

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9 If $\sin \theta = \frac{5}{13}$ with θ in Quadrant I, then $\cos \theta$ is

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

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10 **An angle of 270° in radians is**



A $\frac{\pi}{2}$

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

C π

D 2π

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11 The reference angle for 150° is

- A 60°
- B 120°
- C 30°
- D 150°

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12 The value of cos 180° is

- A 1
- B 0
- C $\frac{1}{2}$
- D -1

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13 **In a right triangle with hypotenuse 10 and adjacent side 6, the value of cos θ is**

A $\frac{3}{5}$

B $\frac{4}{5}$

C $\frac{5}{3}$

D $\frac{5}{4}$

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14 **The graph of y = sin x passes through which point**



A (0, 1)

B $(\frac{\pi}{2}, 1)$

C (π, 1)

D $(\frac{\pi}{2}, 0)$

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15 **If $\tan \theta = 1$ and θ is in Quadrant I, then θ is**

- A 30°
- B 60°
- C 45°
- D 90°

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16 **The value of sec 0° is**

- A 0
- B $\frac{1}{2}$
- C 2
- D 1

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17 Using the Law of Sines, if $\frac{\sin A}{a} = \frac{\sin B}{b}$, with a = 8, $\sin A = \frac{1}{2}$, and $\sin B = \frac{1}{4}$, then b is

ANSWER

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18 An angle of 60° converted to radians is $\frac{\pi}{3}$. An angle of 120° in radians is

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

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

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

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

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19 **The value of sin 90° is**

A 0

B $\frac{1}{2}$

C 1

D -1

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20 **A ladder leans against a wall. The ladder is 13 long and the base is 5 from the wall. How high up the wall does it reach**



ANSWER

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21 The midline of $y = 3\sin x + 2$ is

- A $y = 3$
- B $y = 0$
- C $y = 1$
- D $y = 2$

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22 The value of $\cos 0°$ is

- A 1
- B 0
- C -1
- D $\frac{1}{2}$

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23 If $\sin\theta = 0.6$ and $\cos\theta = 0.8$, then $\sin^2\theta + \cos^2\theta$ is

ANSWER _____

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24 The period of $y = \cos(4x)$ is

A $\frac{\pi}{4}$

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

C 2π

D 4π

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25

In Quadrant II, which trig function is positive

A Cosine

B Tangent

C Sine

D Secant

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ANSWER KEY

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

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