NORTH DAKOTA 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 -1/2

B $\frac{1}{2}$

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

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

Understand It with Pulse | Flag a mistake

2 **The value of cos 120° is**

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

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3 **The value of tan 45° is**

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

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4 **An angle of 150° in radians is**



A 5π/6

B 2π/3

C 3π/4

D 5π/3

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5 **An angle of 3π/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°

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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 θ is in Quadrant I, then cos θ is**

- **A** $\frac{4}{5}$
- **B** -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 $\tan\theta$

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11 **The value of sec 60° is**

A $\frac{1}{2}$

B $\sqrt{3}$

C $2/\sqrt{3}$

D 2

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



A 1

B 2

C 4

D 2π

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



A 2π

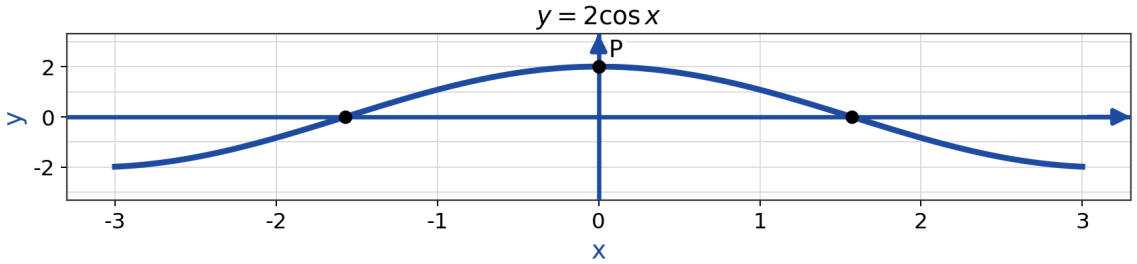
B $2\pi/3$

C $\pi/3$

D 3π

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14 **The graph shows 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 $\frac{13}{5}$

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



A π/3

B 5π/6

C π/2

D π/6

Understand It with Pulse | Flag a mistake

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

- **A** π/6
- **B** π/3
- **C** 5π/6
- **D** -π/6

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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 π/3, the arc length is

- A π
- B 2π
- C 3π
- D 6π

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20 For a circle of radius 4 and central angle π/2, the sector area is

- A 4π
- B 2π
- C 8π
- D 16π

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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

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

- A $\frac{3}{4}$
- B $\frac{4}{3}$
- C -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 _____

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25 **In degrees, π/2 radians is ____.**

ANSWER _____

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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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