

QUIZZZ

NAME : _____

CLASS : _____

Graphing Graphing Trigonometric Functions
25 Questions

DATE : _____

1. What is the amplitude of $y = -3\sin(7x) - 2$

 A 3

 C -3

 B 7

 D -2

$$y = A\sin(\omega(x-h)) + k$$

$$\begin{aligned} \text{Amplitude} &= |A| \\ &= |-3| \\ &= 3 \end{aligned}$$

2. What is the period of $y = \cos(3x - \pi) - 5$?

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

$$\begin{aligned} \text{Period} &= \frac{2\pi}{\omega} \\ &= \frac{2\pi}{3} \end{aligned}$$

$$y = \cos x \leftarrow \text{Period} = 2\pi$$

3. what is the midline for $y = 2\cos(1/3x + \pi/6) + 2$

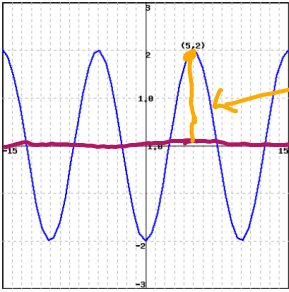
 A -2

 C $1/3$
 B 4

 D 2

$$y = A\cos(\omega x - h) + k$$

$$k = 2$$

4.  what is the amplitude of the graph shown

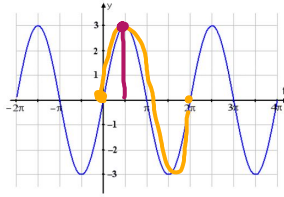
 A 2

 C 1

 B 4

 D 3

5.



Which function below matches this graph?

Period = 2π

midline = 0
 $\Rightarrow k=0$

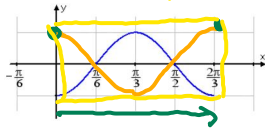
A $3\sin(x) + 0$

B $3+\sin(x)$

C $3\cos(x)$

D $3+\cos(x)$

6.



Which function below matches this graph?

Period $\neq 2\pi$

A is negative

Period = $2\pi/\omega$
 $\frac{2\pi}{3} = \frac{2\pi}{\omega}$
 $\omega = 3$
 Formula

A $\cos(x+3)$

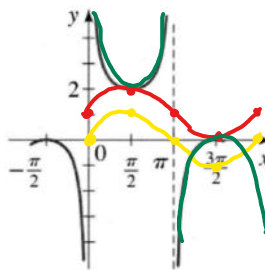
B $\cos(x)-3$

C $-3\cos(x)$

Period = $\frac{2\pi}{3}$
 $\omega = 3$

D $-\cos(3x)$

7.



Which function below matches this graph?

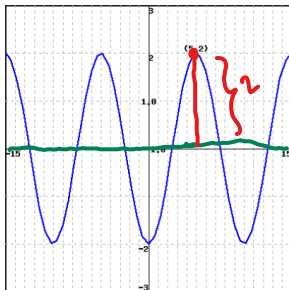
A $\csc(x)$

B $1+\csc(x)$

C $1-\csc(x)$

D $-\csc(x)$

8.



what is the amplitude of the graph shown

$y=0$

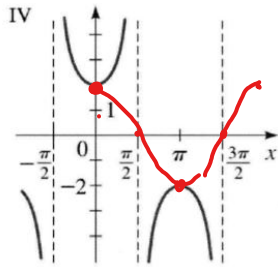
A 3

B 4

C 2

D 1

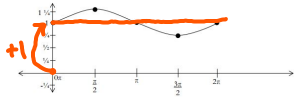
9.



Which function below matches this graph?

- A $\sec 2(x)$
- B $\sec(x-2)$
- C $2+\sec(x)$
- D $2\sec(x)$

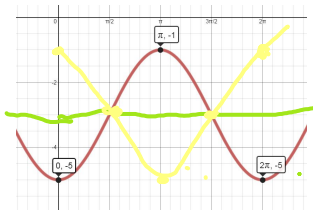
10.



Which function below matches this graph?

- A $1/4\cos(x)+1$
 - B $\sin 4(x-1)$
 - C $-\cos 4(x)$
 - D $1/4\sin(x)+1$
- No vertical shift*

11.



What is the equation of the graph?

- A $y = -2\sin x - 3$
 - B $y = -3\cos x - 2$
 - C $y = 2\cos x + 3$
 - D $y = -2\cos x - 3$
- von*

12. What is the y-intercept of $y = \cos(x)$?

- A (0,0)
- B (0,1)
- C (-1,0)
- D (0, -1)

13. What is the y-intercept of $y = \sin(x)$?

- A (0,0)
- B (1,0)
- C (0, -1)
- D (0,1)

14. What is the y-intercept of $y = -\cos x$?

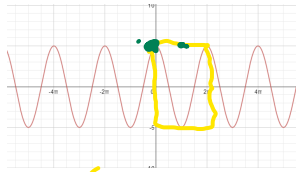
A (0,1)

B (0,0)

C (0, -1)

D (1,0)

15.



What is the equation of graph?

Period = 2π

~~A $y = \cos 5x$~~

~~B $y = \sin 5x$~~

C $y = 5 \sin x$

D $y = 5 \cos x$

16. What is the period of $y = 3 \sin 2x$?

Period = $\frac{2\pi}{\omega} = \frac{2\pi}{2} = \pi$

A 180 degrees

B 2

C 3

D 360 degrees

17.

4) $\sin \frac{2\pi}{3}$

Evaluate the trig function:

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

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

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

D) -2

A C

B D

C B

D A

18.

5) $\sin 180^\circ$

Evaluate the trig function:

A) Undefined

B) 0

C) -2

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

~~A B~~

~~B C~~

~~C A~~

~~D D~~

19.

10) $\csc 60^\circ$

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

Evaluate the trig function:

reciprocal of sin

*$\sin 60 = \frac{\sqrt{3}}{2}$
 $\csc 60 = \frac{2}{\sqrt{3}}$*

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

$\frac{2}{\sqrt{3}} \left(\frac{\sqrt{3}}{\sqrt{3}}\right) = \frac{2\sqrt{3}}{3}$

A

C

B

D

C

B

D

A

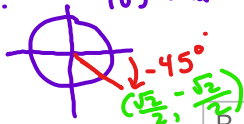
20.

14) $\tan -405^\circ$

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

Evaluate the trig function:

*$-405 + 360 = -45$
 -405 and -45 are coterminal*



*$\tan \theta = \frac{y}{x}$
 $= \frac{-\frac{\sqrt{2}}{2}}{\frac{\sqrt{2}}{2}}$
 $= -1$*

A

A

B

D

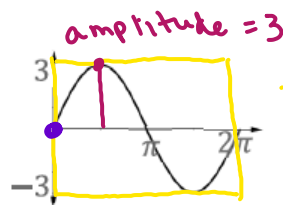
C

C

D

B

21.



Which function represents the graph?

Period = $2\pi \Rightarrow w = 1$

A

$f(x) = 3 \cos x$

B

$f(x) = 3 \sin x$

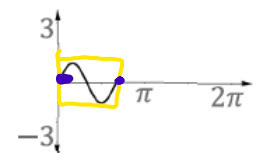
C

$f(x) = \sin\left(\frac{1}{3}x\right)$

D

$f(x) = \sin(3x)$

22.



Write an equation to represent

A

$f(x) = \sin(3x)$ *Period = $\frac{2\pi}{3}$*

B

$f(x) = \cos(3x)$

C

$f(x) = \sin\left(\frac{1}{3}x\right)$ *Period = $\frac{2\pi}{1/3} = 6\pi$*

D

$f(x) = \sin\left(\frac{1}{3}x\right)$

23. What does a negative A value transform?

A

A reflection across X axis

B

A reflection across the Y axis

C

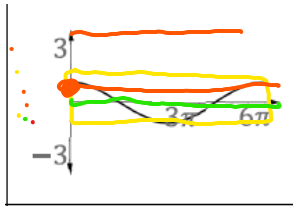
Notta

D

A negative amplitude

No negative amplitude ever!

24.



Write an equation to represent

Period = 6π

~~$6\pi = 2\pi$~~
 ~~$(1/3)$~~

$$\omega = \frac{2\pi}{6\pi} = \frac{1}{3}$$

A $f(x) = 3 \cos x$

B $f(x) = \cos (\frac{1}{3} x)$

C $f(x) = 3 \sin x$

D $f(x) = \sin (\frac{1}{3} x)$

25. The period of a sine or cosine graph can be found by

$y = A \sin [B(x+C)] + D$

Period = $\frac{2\pi}{\omega}$

A $2\pi + B$

B $B(2\pi)$

C It's always 2π

D $2\pi/B$

Answer Key

- | | | | |
|-------|-------|-------|-------|
| 1. a | 2. b | 3. d | 4. a |
| 5. a | 6. d | 7. b | 8. c |
| 9. d | 10. d | 11. d | 12. b |
| 13. a | 14. c | 15. d | 16. a |
| 17. c | 18. a | 19. d | 20. a |
| 21. b | 22. a | 23. a | 24. b |
| 25. d | | | |