

F.IF.B.4: Graphing Trigonometric Functions 2

- 1 What is the minimum value of $f(\theta)$ in the equation $f(\theta) = 3 \sin 4\theta$?
 - 1) -1
 - 2) -2
 - 3) -3
 - 4) -4
- 2 The maximum value of the function $y = 3 \sin 2x$ is
 - 1) π
 - 2) 2
 - 3) 3
 - 4) 2π
- 3 What is the maximum value for the function $y = \frac{1}{3} \sin 5x$ is:
 - 1) $-\frac{1}{3}$
 - 2) $\frac{1}{3}$
 - 3) $\frac{1}{5}$
 - 4) -5
- 4 What is the maximum value of y for the equation $y = 1 + 3 \sin x$?
 - 1) 1
 - 2) 2
 - 3) 3
 - 4) 4
- 5 If $f(x) = 2 \sin 3x + C$, then the maximum value of $f(x)$ is:
 - 1) C
 - 2) $C + 2$
 - 3) $C + 3$
 - 4) $C + 6$
- 6 The path traveled by a roller coaster is modeled by the equation $y = 27 \sin 13x + 30$. What is the maximum altitude of the roller coaster?
 - 1) 13
 - 2) 27
 - 3) 30
 - 4) 57
- 7 What is the range of the function $y = 4 \cos x$?
 - 1) $-1 \leq y \leq 1$
 - 2) $-4 \leq y \leq 4$
 - 3) $y \geq 0$
 - 4) $y \leq 4$
- 8 What is the range of the function $y = 2 \cos 3x$?
 - 1) $-1 \leq y \leq 1$
 - 2) $-2 \leq y \leq 2$
 - 3) $-3 \leq y \leq 3$
 - 4) $-\frac{3}{2} \leq y \leq \frac{3}{2}$
- 9 What is the range of the function $y = 2 \sin 3x$?
 - 1) all real numbers
 - 2) $-1 \leq y \leq 1$
 - 3) $-2 \leq y \leq 2$
 - 4) $-3 \leq y \leq 3$
- 10 Which is *not* in the range of the function $y = \cos x$?
 - 1) 1
 - 2) 2
 - 3) $\frac{1}{2}$
 - 4) $-\frac{1}{2}$

- 11 Which number is *not* an element of the range of $y = \sin x$?
- 1
 - 2
 - 1
 - 0
- 12 Which transformation could be used to make the graph of the equation $y = \sin x$ coincide with the graph of the equation $y = \cos x$?
- translation
 - rotation
 - dilation
 - point reflection
- 13 Which type of symmetry does the equation $y = \cos x$ have?
- line symmetry with respect to the x -axis
 - line symmetry with respect to $y = x$
 - point symmetry with respect to the origin
 - point symmetry with respect to $\left(\frac{\pi}{2}, 0\right)$
- 14 As angle x increases from 180° to 270° , the value of $\cos x$ will
- increase from 0 to 1
 - increase from -1 to 0
 - decrease from 0 to -1
 - decrease from 1 to 0
- 15 As angle θ increases from π radians to 2π radians, the cosine of θ
- increases throughout the interval
 - decreases throughout the interval
 - increases, then decreases
 - decreases, then increases
- 16 As θ increases from $\frac{\pi}{2}$ to $\frac{3\pi}{2}$, the value of $\cos \theta$
- decreases, only
 - increases, only
 - decreases and then increases
 - increases and then decreases
- 17 As angle x increases from $\frac{\pi}{2}$ to π , the value of $\sin x$ will
- increase from -1 to 0
 - increase from 0 to 1
 - decrease from 0 to -1
 - decrease from 1 to 0
- 18 As x increases from π to 2π , the value of $\sin x$
- increases, only
 - decreases, only
 - increases, then decreases
 - decreases, then increases
- 19 As θ increases from π to $\frac{3\pi}{2}$, which statement is true?
- $\sin \theta$ increases from -1 to 0.
 - $\sin \theta$ decreases from 1 to 0.
 - $\cos \theta$ decreases from 0 to -1.
 - $\cos \theta$ increases from -1 to 0.
- 20 The graph of the equation $y = |\sin x|$ will contain *no* points in Quadrants
- I and II
 - II and III
 - III and IV
 - I and IV

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Answer Section

1 ANS: 3 REF: 018935siii

2 ANS: 3 REF: 068125siii

3 ANS: 2 REF: 089420siii

4 ANS: 4 REF: 019033siii

5 ANS: 2

The maximum of a sine wave is 1. $2(1) + C = C + 2$.

REF: fall9919b

6 ANS: 4

The maximum of a sine wave is 1. $27(1) + 30 = 57$.

REF: 080419b

7 ANS: 2 REF: 060324siii

8 ANS: 2 REF: 069429siii

9 ANS: 3 REF: 010125siii

10 ANS: 2 REF: 018420siii

11 ANS: 2 REF: 019617siii

12 ANS: 1 REF: 010711b

13 ANS: 4 REF: 010216b

14 ANS: 2 REF: 068121siii

15 ANS: 1 REF: 060129siii

16 ANS: 3 REF: 089029siii

17 ANS: 4 REF: 060020siii

18 ANS: 4 REF: 080029siii

19 ANS: 4 REF: 068524siii

20 ANS: 3 REF: 080903b