

**A2.A.69: Properties of Graphs of Trigonometric Functions 3: Determine amplitude, period, frequency, and phase shift, given the graph or equation of a periodic function**

- 1 The maximum value of the function  $y = 3 \sin 2x$  is:
  - 1)  $\pi$
  - 2) 2
  - 3) 3
  - 4)  $2\pi$
- 2 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
- 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 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
- 6 If  $f(x) = 2 \sin 3x + C$ , then the maximum value of  $f(x)$  is:
  - 1)  $C$
  - 2)  $C + 2$
  - 3)  $C + 3$
  - 4)  $C + 6$
- 7 A monitor displays the graph  $y = 3 \sin 5x$ . What will be the amplitude after a dilation of 2?
  - 1) 5
  - 2) 6
  - 3) 7
  - 4) 10
- 8 What will be the amplitude of the image of the curve  $y = 2 \sin 3x$  after a dilation of scale factor 2?
- 9 The graph of the equation  $y = |\sin x|$  will contain *no* points in Quadrants
  - 1) I and II
  - 2) II and III
  - 3) III and IV
  - 4) I and IV

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**Answer Section**

1	ANS: 3	PTS: 2	REF: 068125siii
2	ANS: 3	PTS: 2	REF: 018935siii
3	ANS: 2	PTS: 2	REF: 089420siii
4	ANS: 4	PTS: 2	REF: 019033siii
5	ANS: 4	PTS: 2	REF: 080419b
6	ANS: 2	PTS: 2	REF: fall9919b
7	ANS: 2	PTS: 2	REF: 010301b
8	ANS: 4		
	PTS: 2	REF: 069707siii	
9	ANS: 3	PTS: 2	REF: 080903b