14 Chapter 14 Quiz 1

(Lessons 14–1 and 14–2)

SCORE _____

For Questions 1 and 2, find the amplitude, if it exists, and period of each function. Then graph the function.

1. $y = \frac{1}{2} \cos \theta$

1. _____
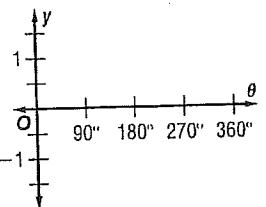
2. $y = \tan 2\theta$

2. _____
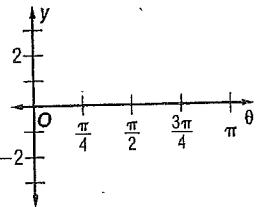
**3.** State the phase shift of $y = \sin\left(\theta + \frac{\pi}{4}\right)$.

3. _____

4. State the vertical shift ~~and the equation of the midline for~~ and other Key features. Graph.
   $y = 4 \cos \theta + 2$.

4. _____

14 Chapter 14 Mid-Chapter Test

SCORE _____

(Lessons 14–1 through 14–4)

Part I *For Questions 1–5, write the letter for the correct answer in the blank at the right of each question.*

Use the graph shown at the right.

1. Find the period of the function.

   A. 4   **B.** 2π

   C. π **D.** 2

   1. _____
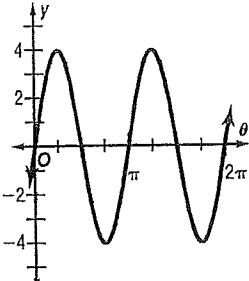
2. Find the amplitude of the function.

   A. 4   **B.** 8

   C. π **D.** $\frac{\pi}{4}$

   2. _____

For Questions 3 and 4, use the graph shown at the right.

3. Find the phase shift of the function.

   A. $\frac{\pi}{4}$ **B.** $-\frac{\pi}{4}$

   C. 1   **D.** 2
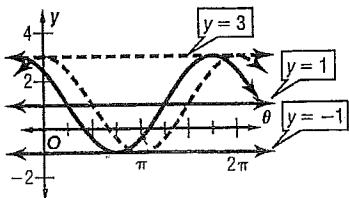
   3. _____

4. Find the vertical shift of the function.

   A. 1   **B.** 2   **C.** $\frac{\pi}{4}$ **D.** $-\frac{\pi}{4}$

   4. _____

Part II

6. Graph the function $y = \frac{1}{2} \cos 4\theta$.

   6.
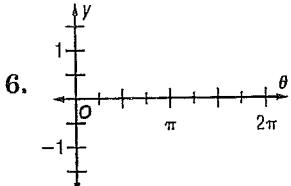
7. Find the amplitude, if it exists, and period of the function $y = 2 \tan 4\theta$. Then Graph.

   7. _____

14 Chapter 14 Test, Form 1

Write the letter for the correct answer in the blank at the right of each question.

1. Which equation is graphed?

   A. $y = 4 \sin \theta$ **B.** $y = 4 \cos \theta$

   C. $y = \sin 4\theta$ **D.** $y = \cos 4\theta$

   1. _____
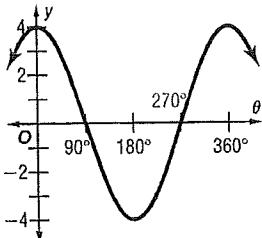
2. Find the amplitude of $y = 6 \sin \theta$.

   A. 6   **B.** π **C.** -6 **D.** 2π

   2. _____

3. Find the period of $y = 5 \cos \theta$.

   A. -5 **B.** 5   **C.** π **D.** 2π

   3. _____

4. Which equation is graphed?

   A. $y = \sin (\theta + 30°)$

   B. $y = \sin (\theta - 30°)$

   C. $y = \cos (\theta + 30°)$

   D. $y = \cos (\theta - 30°)$
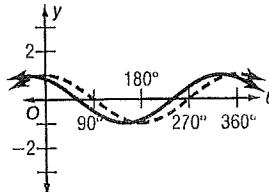
   4. _____

5. Which equation is graphed?

   A. $y = \cos \theta - 2$ **B.** $y = \cos \theta + 2$

   C. $y = \sin \theta + 2$ **D.** $y = \sin \theta - 2$
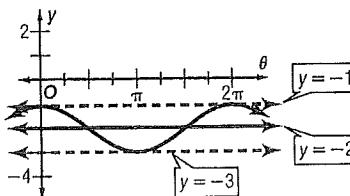
   5. _____

6. Find $\sin \theta$ if $\cos \theta = \frac{1}{2}$ and $0° \le \theta < 90°$.

   A. $\frac{\sqrt{3}}{2}$ **B.** $-\frac{\sqrt{3}}{2}$ **C.** $\frac{3}{4}$ **D.** $\frac{1}{2}$

   6. _____

7. Find $\cot \theta$ if $\tan \theta = \frac{1}{3}$ and $0° \le \theta < 90°$.

   A. 4   **B.** 3   **C.** -3 **D.** $-\frac{1}{3}$

   7. _____

8. Simplify $\sin \theta \csc \theta$.

   A. $\sin^2 \theta$ **B.** -1 **C.** $\tan \theta$ **D.** 1

   8. _____

9. Simplify $\tan \theta \cos \theta$.

   A. $\frac{\cos^2 \theta}{\sin \theta}$ **B.** $\cot \theta$ **C.** $\sin \theta$ **D.** $1 - \sec^2 \theta$

   9. _____

14-1 to 14-2 Mixed Review

★ State All Key Features ★

Lesson 14-1 (pages 822–828)

Find the amplitude, if it exists, and period of each function. Then graph each function.

1. $y = 2 \cos \theta$

2. $y = \frac{1}{3} \sin \theta$

3. $y = \sin 3\theta$

4. $y = 3 \sec \theta$

5. $y = \sec \frac{1}{3}\theta$

6. $y = 2 \csc \theta$

7. $y = 3 \tan \theta$
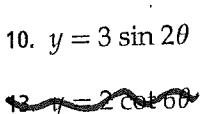
8. $y = 3 \sin \frac{2}{3}\theta$
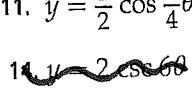
9. $y = 2 \sin \frac{1}{5}\theta$

10. $y = 3 \sin 2\theta$

11. $y = \frac{1}{2} \cos \frac{3}{4}\theta$

12. $y = 5 \csc 3\theta$
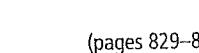
13. $y = 2 \cot 6\theta$

14. $y = 2 \csc 6\theta$

15. $y = 3 \tan \frac{1}{3}\theta$
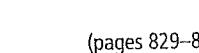
Lesson 14-2 (pages 829–836)

State the phase shift for each function. Then graph the function.

1. $y = \sin (\theta + 60°)$

2. $y = \cos (\theta - 90°)$

3. $y = \tan \left(\theta + \frac{\pi}{2}\right)$

4. $y = \sin \theta + \frac{\pi}{6}$

State the vertical shift and the equation of the midline for each function. Then graph the function.

5. $y = \cos \theta + 3$

6. $y = \sin \theta - 2$

7. $y = \sec \theta + 5$

8. $y = \csc \theta - 6$

9. $y = 2 \sin \theta - 4$

10. $y = \frac{1}{3} \sin \theta + 7$

State the vertical shift, amplitude, period, and phase shift of each function. Then graph the function.

11. $y = 3 \cos [2(\theta + 30°)] + 4$

12. $y = 2 \tan [3(\theta - 60°)] - 2$

13. $y = \frac{1}{2} \sin [4(\theta + 45°)] + 1$

14. $y = \frac{2}{5} \cos [6(\theta + 45°)] - 5$

15. $y = 6 - 2 \sin \left[3\left(\theta + \frac{\pi}{2}\right)\right]$

16. $y = 3 + 3 \cos \left[2\left(\theta - \frac{\pi}{3}\right)\right]$