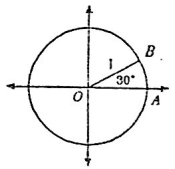
Math 3 Trig. Test
Review

Date: _____

1. In the accompanying diagram, the center of circle O is at the origin, radius $OB = 1$, and $m\angle AOB = 30$. What are the coordinates of point B?



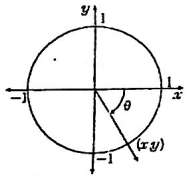
A. $\left(\frac{1}{2}, \frac{\sqrt{3}}{2}\right)$

B. $\left(\frac{\sqrt{2}}{2}, \frac{\sqrt{2}}{2}\right)$

C. $\left(\frac{\sqrt{3}}{2}, \frac{1}{2}\right)$

D. $(1, 1)$

2. In the accompanying diagram of a unit circle, the ordered pair (x, y) represents the point where the terminal side of θ intersects the unit circle. If $\theta = -\frac{\pi}{3}$, what is the value of y?

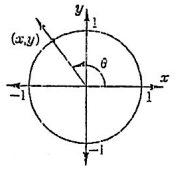


A. $-\frac{\sqrt{3}}{2}$ B. $-\frac{\sqrt{2}}{2}$

C. $-\sqrt{3}$ D. $-\frac{1}{2}$

3. In the accompanying diagram of a unit circle, the ordered pair (x, y) represents the point where the terminal side of θ intersects the unit circle.

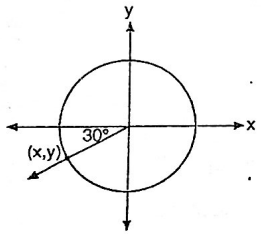
If $\theta = \frac{3\pi}{4}$, what is the value of x?



A. 1 B. $-\frac{1}{2}$

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

4. In the unit circle shown in the accompanying diagram, what are the coordinates of (x, y)?



A. $\left(-\frac{\sqrt{3}}{2}, -0.5\right)$ B. $\left(-0.5, -\frac{\sqrt{3}}{2}\right)$

C. $(-30, -210)$ D. $\left(-\frac{\sqrt{2}}{2}, -\frac{\sqrt{2}}{2}\right)$

5. Express $\frac{5\pi}{9}$ radians in degree measure.

100°

6. Express 300° in radian measure.

$\frac{5\pi}{3}$

7. The value of $\sin\frac{7\pi}{3}$ is

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

8. The value of $\sin(-210°)$ is

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

9. What is the amplitude of the graph of the equation $y = 2\sin\frac{1}{2}x$?

A. $\frac{1}{2}$ B. 2 C. π D. 2π

10. What is the period of the graph of the equation $y = 3\cos 2x$?

A. π B. 2 C. 3 D. 2π

11. What is the maximum value of y for the equation $y = 1 + 3\sin x$?

A. 1 B. 2 C. 3 D. 4

12. What is the amplitude of the graph whose equation is $y = -4\sin 2x$?

A. π B. 2 C. −2 D. 4

13. An angle with measure $\frac{7\pi}{4}$ radians is in standard position. In which quadrant does its terminal side lie?

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