16

Trig QZ 11

11.8.2012

16. key

Block _____

$\frac{2\pi}{\frac{2}{7}}$

7π 1. Consider the equation $y = \frac{4}{3}\sin(\frac{2}{7}x) + 4$. Give the period of the graph of this function (in radians, please)

none 2. Consider the equation $y = \frac{-2}{3}\sin(2x)$. Give the size and direction of the vertical shift of the graph of this equation.

Down 1.4 3. Consider the equation $y = \frac{-7}{3}\cot(2x) - 1.4$. Give the size and direction of the vertical shift of the graph of this equation.

π/3 4. Consider the equation $y = \frac{4}{3}\tan(3x) + 5$. Give the period of the graph of this function (in radians, please).

3/2 5. Consider the equation $y = \frac{-3}{2}\sin(x + \frac{3\pi}{4}) - \frac{1}{2}$ Give the amplitude of the graph of this equation.

$\frac{\pi}{6}, \frac{1}{2}$ $\frac{5\pi}{6}, \frac{1}{2}$

left $\frac{3\pi}{4}$

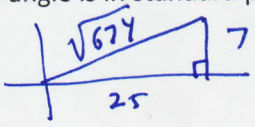
4 + 2

$\frac{41\pi}{12}$ $\frac{\pi}{12}$ 6. Consider the equation $y = \sin(x + \frac{3\pi}{4}) - \frac{1}{2}$ Give the exact value of the fourth point where the graph of this function will cross the x-axis to the right of the origin.

$\frac{5\pi}{6} - \frac{3\pi}{4}$

$\frac{10\pi - 9\pi}{12}$

0.96296 ← 25/√674 7. Evaluate $\cos(\arctan(\frac{7}{25}))$. Please assume the angle is in standard position and terminates within first quadrant.

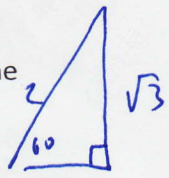


625 + 49 = 674

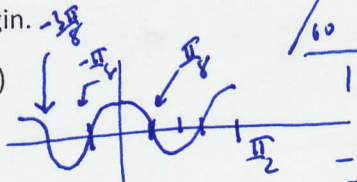
√3/3 ← 1/√3 8. Give the exact value of $\cot(60^\circ)$.

$\frac{2\pi}{4} = \frac{\pi}{2}$

$\frac{-\pi}{8}$ 9. Consider the equation $y = 3\cos 4(x - \frac{\pi}{4})$. Give the exact value of the coordinates of the first place where the graph crosses the x-axis to the left of the origin.



$-\frac{3\pi}{8}$



$-\frac{3\pi}{8} + \frac{\pi}{4}$

$\frac{-3\pi + 2\pi}{8}$

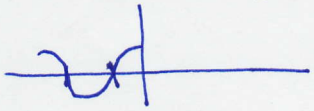
∅ 10. Perhaps with the aid of a calculator evaluate sec($\frac{-21\pi}{2}$ radians)

$0 \le y \le \pi$ 11. Give the range of the function y=arccos(x)

F 12. Mark as true or false. Since the sin(150°)=0.5 it must be the case that $\sin^{-1}(.5) = 150$

45° B 13. In a certain right angle triangle, a = 70.7, and c = 100. Find A. Note that the triangle's sides and angles are labeled in the customary way.

A. 30° B. 45° C. 60° D. 15° E. 75°



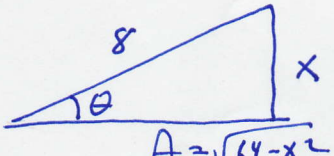
$\frac{\sqrt{64-x^2}}{8}$ 14. Evaluate $\cos(\arcsin(\frac{x}{8}))$ The angle is in standard position and terminates in first quadrant.

Evaluate in terms of x and 8, this means don't introduce another variable other than x.

B 15. Which of the following is equivalent to this expression: $\frac{\csc^2\theta}{\cot\theta}$

A. $\csc(\theta)\cos(\theta)$ B. $\csc(\theta)\sec(\theta)$ C. $\csc^2(\theta)$

D. $\csc(\theta)\sin(\theta)$ E. $\csc(\theta)\cot(\theta)$ F. $\csc(\theta)\tan(\theta)$



$\csc\theta \cdot \frac{1}{\sin\theta\cos\theta}$

$A^2 + x^2 = 8^2$

$A = \sqrt{64-x^2}$