

Trig QZ 13

11.30.2012

8. _____

Block _____

- _____ 1. Consider the equation $y = 2 \sin(x + \frac{3\pi}{4}) - 1$. Give the exact value of the third point where the graph of this function will cross the x-axis to the right of the origin.
- _____ 2. Evaluate $\tan(\arcsin(\frac{7}{25}))$. Please assume the angle is in standard position and terminates within first quadrant. Give the exact value, not a decimal approximation.
- _____ 3. Give the exact value of $\cot(-2940^\circ)$.
- _____ 4. Perhaps with the aid of a calculator evaluate $\sec(\frac{-422\pi}{2}$ radians).
- _____ 5. Evaluate $\cos(\arcsin(\frac{5x}{7}))$. The angle is in standard position and terminates in first quadrant. Evaluate in terms of $5x$ and 7 , this means don't introduce another variable other than x .
- _____ 6. A student was solving a trigonometric equation and came up with the following three solutions, $x = \frac{-8\pi}{7}, \frac{6\pi}{5}, \frac{29\pi}{3}$. The student was pretty confident these angles were correct but then noticed that the instructions said "solve for all solutions $2\pi \leq x < 4\pi$ ". Assuming the student's original solutions were correct, what answers satisfy the condition given in the instructions?
- _____ 7. Solve the following trig equation for all solutions $0 \leq x < 2\pi$. $2 \cos^2 x - \sin x - 1 = 0$
- _____ 9. Consider the equation $y = 2 \sin(\frac{2}{3}(x)) - 1$. Give the exact value of the third point where the graph of this function will cross the x-axis to the right of the origin.