Algebra 2 Bellwork Tuesday, May 10, 2016

Use the Unit Circle for this Bellwork.

Find the EXACT value of each.

1. $\text{Tan}\left(\frac{-29\pi}{6}\right) =$

2. $\text{Cos}1305° =$

3. $\text{Sin}(-6720°) =$

Find ALL angles, $0 \le \theta \le 2\pi$ that makes each statement true. Give answers in radians.

4. $\text{Sin}\theta = -\frac{1}{2}$

$\theta =$

5. $\text{Tan}\theta$ is undefined

$\theta =$

6. $\text{Cos}\theta = \frac{\sqrt{2}}{2}$

$\theta =$

7. $\text{Tan}\theta = -\sqrt{3}$

$\theta =$

8. Find θ if $\text{Tan}\theta = -\frac{\sqrt{3}}{3}$ and $\text{Cos}\theta < 0$

9. Find $\text{Sin}\theta$ if $\text{Cos}\theta = -\frac{\sqrt{3}}{2}$ and $\pi \le \theta \le \frac{3\pi}{2}$

Algebra 2 Bellwork Tuesday, May 10, 2016 Answers

Use the Unit Circle for this Bellwork.

Find the EXACT value of each.

1. $\text{Tan}\left(\frac{-29\pi}{6}\right) = \frac{-\frac{1}{2}}{-\sqrt{3}/2} = \frac{\sqrt{3}}{3}$

$= \text{Tan}\left(\frac{7\pi}{6}\right)$

2. $\text{Cos}1305° = \text{Cos}\,225 = -\frac{\sqrt{2}}{2}$

3. $\text{Sin}(-6720°) = \text{Sin}(120) = \frac{\sqrt{3}}{2}$

Find ALL angles, $0 \le \theta \le 2\pi$ that makes each statement true. Give answers in radians.

4. $\text{Sin}\theta = -\frac{1}{2}$

$\theta = \frac{7\pi}{6}, \frac{11\pi}{6}$

5. $\text{Tan}\theta$ is undefined when x is zero

$\theta = \frac{\pi}{2}, \frac{3\pi}{2}$

6. $\text{Cos}\theta = \frac{\sqrt{2}}{2}$

$\theta = \frac{\pi}{4}, \frac{7\pi}{4}$

7. $\text{Tan}\theta = -\sqrt{3} \rightarrow -\sqrt{3} \rightarrow \frac{\frac{\sqrt{3}}{2}}{-\frac{1}{2}}$ or $\frac{-\frac{\sqrt{3}}{2}}{\frac{1}{2}}$ (y-coord)

$\theta = \frac{2\pi}{3}, \frac{5\pi}{3}$

8. Find θ if $\text{Tan}\theta = -\frac{\sqrt{3}}{3}$ and $\text{Cos}\theta < 0$

$-\frac{\sqrt{3}}{3} \rightarrow \frac{-\frac{1}{2}}{\frac{\sqrt{3}}{2}}$ or $\frac{\frac{1}{2}}{-\frac{\sqrt{3}}{2}} \rightarrow \theta = \frac{5\pi}{6}$ or $\frac{11\pi}{6}$ (x-coord)

since Cosθ is neg:

$\theta = \frac{5\pi}{6}$

9. Find $\text{Sin}\theta$ if $\text{Cos}\theta = -\frac{\sqrt{3}}{2}$ and $\pi \le \theta \le \frac{3\pi}{2}$

$\theta = \frac{7\pi}{6}$

$\text{Sin}\theta = \text{Sin}\frac{7\pi}{6} = -\frac{1}{2}$