Name:_____   Date:_____

HW Pre Calculus 12 Section 4.4 Solving for Angles in Standard Position:

1. What is CAST? How is this acronym used in trigonometry to solve for angles? Explain:

2. Suppose $\sin\theta$ gives a negative ratio, which quadrant does θ have to be in?

3. If θ is in Quadrant 2, then which of the six trigonometric ratios are positive? Explain:

4. If $\sin\theta = 0.875$, then why does the angle have to be in Quadrants 1 and 2? Explain:

5. If $\cos\theta = -0.54$, then why does the angle have to be in Quadrants 2 and 3? Explain:

6. If both $\sin\theta$ and $\tan\theta$ are negative, then which quadrant will angle θ be in? Explain:

7. Suppose $\sin\theta = k$, for what value(s) of "k" will there be only ONE angle for θ ? Explain

8. Suppose $\cos^2\theta = k$, where $0 < k < 1$, how many angles θ are there? Explain:

9. Given that $0 \le \theta \le 2\pi$, solve for θ accurate to 3 decimal places.   Show all your work and steps:

a) $3\sin\theta = 2$	b) $4\cos\theta - 3 = 0$	c) $\tan\theta + 4 = 0$
d) $2\sin^2\theta = 1$	e) $-4\cos^2\theta + 5 = 2$	f) $4\sin^2\theta + \sin\theta - 3 = 0$
g) $6\cos^2\theta - 11\cos\theta + 4 = 0$	h) $4\cos\theta = 5\sin\theta$	i) $7\cos\theta = 9\sin\theta$
j) $4\sin\theta\cos\theta - 3\sin\theta = 0$	k) $\sin\theta = \cos\theta$	L) $\sin^2\theta\cos^2\theta - \sin^2\theta - \cos^2\theta + 1 = 0$

10. For what values of θ will $\sec\theta$, $\csc\theta$, or $\cot\theta$ be undefined? Explain:

11. For what values of "k" will $\sec\theta = k$ be undefined? Explain:

12. Given that $0 \le \theta \le 2\pi$, solve for θ. Show all your work and steps:

a) $-\dfrac{1}{3}\csc\theta + 1 = \dfrac{2}{3}$	b) $2\sec\theta = 3$	c) $3\cot\theta = 5$
d) $2\sec\theta\cot\theta = 1$	e) $\sec\theta\sin^2\theta + \sec\theta\cos^2\theta = 3$	f) $\csc\theta\cos^2\theta + \sin\theta = 2$
g) $\csc\theta = 0$	h) $6\csc^2\theta - 15\csc\theta + 12$	i) $10\cot^2\theta - 29\cot\theta + 10 = 0$