Name _____ Period ____

Alg 2 Trig Review 14.3-14.7

Do the following problems IN PENCIL. DUE WED May 23

Find the value of each expression: 1) $\sin\theta$, if $\cot\theta = -\frac{1}{4}$, 4^{th} quadrant	2) $\csc\theta$, if $\sec\theta = -\frac{5}{3}$, 3^{rd} quadrant

Verify that each of the following is an identity:

3) $\csc\theta\cos\theta = \cot\theta$ 4) $(1+\sin\theta)(1-\sin\theta) = \cos^2\theta$

Find the exact value of each expression using a sum or difference formula:

5. $\cos 75°$	6. $\sin(555°)$

Find the exact values of $\sin 2\theta$, $\cos 2\theta$, and $\sin\frac{\theta}{2}$ for the following:

$\sin\theta = \frac{8}{17}$, $90° < \theta < 180°$

7. $\sin 2\theta$	8. $\cos 2\theta$,
9. $\sin\frac{\theta}{2}$	10. Find the exact value of $\cos 67.5°$ using the half angle formula

SHOW ALL YOUR WORK ON A SEPARATE PIECE OF PAPER

Solve the following for the interval $0 \le \theta < 360^\circ$

11. $2\cos^2\theta + \cos\theta = 1$
12. $\sin^2\theta\cos^2\theta = 0$
13. $2\sin\theta - \sqrt{3} = 0$
14. $\tan^2\theta + \sec\theta = 1$
15. $\sin\theta + \cos\theta = 1$
16. $2\cos 2\theta = 1 - 2\sin^2\theta$
17. $\sqrt{2}\sin^3\theta = \sin^2\theta$
18. $\csc^2\theta = \cot\theta + 1$

Solve the following for all values of θ.

19. $\sin 2\theta + \cos\theta = 0$
20. $4\sin^2\theta - 3 = 0$
21. $\tan\theta\cos\theta = \frac{1}{2}$
22. $\cos\theta + \sec\theta = 2$