Name: _____

Score: _____ /15

Worksheet 18 (Due Tue, May 27)

Math 1060Q – Summer 2014

Professor Hohn

Three questions will be chosen randomly to be graded. You must show all of your work to receive full credit!

Find **all** solutions to the following equations in the interval $[0, 2\pi)$.

1. $2\sin t \cos t = \sin t$

2. $2\sin^2 t + \sqrt{3}\sin t = 0$

3. $2\cos^2 t + \cos t - 1 = 0$

4. $\sin t + \tan t = 0$

5. $\sin t = \cos t$

6. $2\sin^2 t - 3\sin t + 1 = 0$

7. $\tan t \sec t + \sqrt{2}\tan t = 0$

Find all solutions x in the interval $[0, 2\pi)$.

8. $\cos(2x) = -\dfrac{\sqrt{2}}{2}$

9. $\sec(3x) = -1$

10. $\sin\left(\dfrac{x}{2}\right) = \dfrac{\sqrt{3}}{2}$

11. $\tan^2(2x) = 3$

Using the trigonometric identities, find all solutions x in $[0, 2\pi)$.

12. $\sin(2x) = \cos x$

13. $2\cot^2 x = 3\csc x$

14. $\cos(4x) = \cos(2x)$

15. $2\cos^2\left(\frac{x}{2}\right) + \sin^2 x = 0$