

Trig Review: Solving Trigonometric Equations

Name: _____

1. $2\sin^2 \theta - \sin \theta = 0$

2. $\tan^2 \theta - \tan \theta = 2$

3. $6\sec^2 \theta + \sec \theta - 12 = 0$

4. $\sin 2x = 2\cos x$

NOTE: Double-Angle Identities may be necessary!

$$\sin 2x = 2\sin x \cos x$$

$$\cos 2x = \cos^2 x - \sin^2 x$$

$$= 1 - 2\sin^2 x$$

$$= 2\cos^2 x - 1$$

Practice: Solve the following Trig Equations.

1. $2\sin^2 x - 5\sin x + 2 = 0$

2. $\sin^2 x - 2\sin x - 3 = 0$

3. $3\cos 2x - 5\cos x = 1$

4. $2\tan x \cos x + 2\cos x = \tan x + 1$

5. $2\sin^2 x - 1 = 0$

6. $\cos x = 3\cos x - 2$

7. $\tan x = \sin x$

8. $\cos x \sin 2x = 0$

9. $\sec x = 1 + \tan x$

10. $4\sin^2 x - 4\sin x + 1 = 0$

11. $\tan^2 x + \tan x = 0$

12. $2\sin 2x = 1$