

5.3 Studyguide

Solving Trigonometric Equations: $(0 \leq x < 2\pi)$

Undoing: $\sqrt{2} \sin x + 1 = 0$

Factoring (backwards FOIL): $\sec^2 x - \sec x - 2 = 0$

Factoring GCF: $3 \tan^3 x = \tan x$

Using Identities: $2 \sin^2 x = 2 + \cos x$

Square both sides ...CHECK for EXTRANEIOUS SOLUTIONS!

$$\sec x = 1 - \tan x$$

Multiple Angles:

~~$$\tan^2 3x = 3$$~~

Additional Problems:

1.) $2\cos^2x - \cosx = 1$

2.) $2\sin^2x - 3\sinx = -1$

3.) $\cos^2x + \sinx = 1$

4.) $\sin^2x + 2\cosx = 2$

~~5.) $2\sin 2x - \sqrt{2} = 0$~~

~~6.) $\cos 4x(\cos x - 1) = 0$~~

~~7.) $3\csc^2 5x = -4$~~

8.) $\sin^2x - 2\sinx = 0$

9.) $2\cos^2x + 3\cosx = 0$