

30 second expert

Get out paper.

You will become the expert of your question. When we rotate you will switch cards.

you are not allowed to help until time is up.

\*on the right side of your work write down what you learned from your partner\*

Extention: See if you can write down the general solution in as few equations as possible.

Ex 5:  $2 \sin^2 x + 3 \cos x - 3 = 0$

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Ex 6:  $\cos x + 1 = \sin x$

$2 \cos x = 0 \quad \cos x = 1$

$x = \frac{\pi}{2}, \frac{3\pi}{2}, \pi$

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Ex 7:  $2 \cos 3t = 1$

$\cos 3t = \frac{1}{2}$

$3t = \frac{\pi}{3} \quad t = \frac{\pi}{9}$

$3t = \frac{5\pi}{3} \quad t = \frac{5\pi}{9}$

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Ex 8:  $3 \tan \frac{x}{2} + 3 = 0$

$\tan \frac{x}{2} = -\frac{3}{3}$

$\frac{x}{2} = \frac{3\pi}{4}$

$\frac{x}{2} = \frac{7\pi}{4}$   
 $x = \frac{3\pi}{2}, \frac{7\pi}{2}$

$(-\infty, \infty)$

$x = \frac{3\pi}{2} + 2\pi n$   
 where  $n \in \mathbb{Z}$

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Ex 9:  $x = 2 \sin x \quad [0, 2\pi)$

window -1  $\frac{13\pi}{6}$

use a graphing calculator

$x = 0, 1.895$

or  
 $2 \sin x - x = 0$

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