

October 31

Solve each equation:

$$3x(x - 5) = 0$$

$$\begin{array}{l} 3x = 0 \quad x - 5 = 0 \\ x = 0 \quad \quad \quad +5 \quad +5 \\ \quad \quad \quad x = 5 \end{array}$$

$$(x^2 - 4)(x + 3) = 0$$

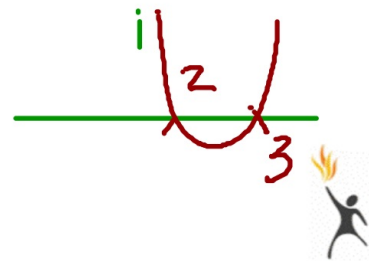
$$\begin{array}{l} x^2 - 4 = 0 \quad x + 3 = 0 \\ \sqrt{x^2} = \sqrt{4} \quad \quad \quad x = -3 \\ x = -2, 2 \end{array}$$

$$x^2 - 5x + 7 = 1$$

$$\begin{array}{r} -1 \quad -1 \\ \hline x^2 - 5x + 6 = 0 \\ (x - 3)(x - 2) = 0 \end{array}$$

$$x - 3 = 0 \quad x - 2 = 0$$

$$x = 3 \quad x = 2$$



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Students will verbally explain how to
solve trig equations

(using the words:
inverse, angle ...)



for $0 \leq x \leq 2\pi$

Solve:

$$2\cos(x) - 1 = 0$$

$$\begin{array}{r} 2\cos x - 1 = 0 \\ +1 \quad +1 \\ \hline 2\cos x = 1 \\ \hline \cos x = \frac{1}{2} \end{array}$$

$$\cos x = \frac{1}{2}$$

$$\cos^{-1}(\cos x) = \cos^{-1}\left(\frac{1}{2}\right)$$

$$x = \cos^{-1}\left(\frac{1}{2}\right)$$

$$x = \frac{\pi}{3}, \frac{5\pi}{3}, -\frac{5\pi}{3}, -\frac{\pi}{3}$$

$$\begin{array}{r} -\frac{10\pi}{6} \\ -\frac{15\pi}{9} \end{array}$$

$$\begin{array}{r} 2y - 1 = 0 \\ +1 \quad +1 \\ \hline 2y = 1 \\ \hline y = \frac{1}{2} \end{array}$$

$$\frac{17\pi}{3} = \frac{5\pi}{3} + 2\pi + 2\pi$$

$$\frac{5\pi}{3} + \frac{6\pi}{3} + \frac{6\pi}{3}$$