

## Homework Questions??

$$\textcircled{3} \quad p \cancel{-4} = -9 + p$$

$\quad \quad \quad +4 \quad \quad \quad +4$

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$$\cancel{p} = -5 + \cancel{p}$$

$\cancel{-p} \quad \quad \quad \cancel{-p}$

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$$0 = -5$$

No Solution

## Solving One-Variable Equations (continued)

Example 1

$$\begin{array}{r}
 x + 2 = 3(2x - 3) \\
 \cancel{x} + \cancel{2} = 6x - 9 \\
 \hline
 x = \cancel{6x} - 11 \\
 \cancel{-6x} \quad \cancel{+6x}
 \end{array}$$

$$\frac{-5x}{-5} = \frac{-11}{-5}$$

$$x = \frac{11}{5}$$

Example 2

$$3(2x - 2) - 2x = -6x$$

$$6x - 6 - 2x = -6x$$

$$\cancel{6x} - 6 = -6x$$

$$\begin{array}{r}
 \cancel{-4x} - 6 = -6x \\
 \hline
 -6 = -10x
 \end{array}$$

$$x = \frac{6}{10} = \frac{3}{5}$$

**Example 3**  $-4(x + 6) + 2x = 46x$

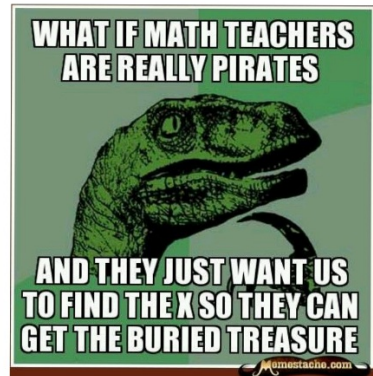
$$\underline{-4x - 24} + \underline{2x} = 46x$$

$$\begin{array}{r} \cancel{-2x} - 24 = 46x \\ + \cancel{2x} \qquad \qquad + 2x \end{array}$$

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$$\frac{-24}{48} = \frac{48x}{48}$$

$$\boxed{-\frac{1}{2} = x}$$



## Simplifying Radicals (Continued)

[Note] Taking the square root of a negative gives you an imaginary number.

$$\sqrt{-1} = i$$

Example 1  $\sqrt{-75p^2}$

Handwritten prime factorization of 75: 75 is factored into 25 and 3. 25 is further factored into 5 and 5. The 5s and 3 are circled in red. The 5s are crossed out with blue X's.

Handwritten prime factorization of  $p^2$ :  $p^2$  is factored into  $p$  and  $p$ . Both  $p$ 's are circled in red and crossed out with blue X's.

The simplified radical expression is written in blue:  $ip5\sqrt{3}$ . Below it, the final simplified form is boxed in blue:  $5pi\sqrt{3}$ .