Algebra I

3-4

Solving Equations

Solve - Get the variable on a side by itself.

1) $5n = 2n + 6$

$5n - 2n = 2n - 2n + 6$

$\frac{3n}{3} = \frac{6}{3}$

$n = 2$

$\{2\}$

19) $2(x - 6) = 3x$

$2x - 12 = 3x$

$2x - 2x - 12 = 3x - 2x$

$-12 = 1x$

$\{-12\}$

13) $4n + 5 = 6n + 7$

$4n - 4n + 5 = 6n - 4n + 7$

$5 = 2n + 7$

$5 - 7 = 2n + 7 - 7$

$\frac{-2}{2} = \frac{2n}{2}$

$-1 = n$

$\{-1\}$

*) $(8x + 3) - 7 = 4(2x + 1)$ Associative Prop

$8x + 3 - 7 = 8x + 4$

$8x - 4 = 8x + 4$

$8x - 8x - 4 = 8x - 8x + 4$

$-4 = 4$ ← False!

What the?

No variable left!

If the variables cancel, look to see if the numbers are true or false.

$\varnothing$ ← No Solution

*) $3(2x - 5) = 6(x - 2) - 3$

$6x - 15 = 6x - 12 - 3$

$6x - 15 = 6x - 15$

$6x - 6x - 15 = 6x - 6x - 15$

$-15 = -15$

No variable.

True!

$\mathbb{R}$ ← All real numbers.

Book calls this identity

$\mathbb{R}$

Assignment:

The Classic, 3-5

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1-30 all