1.9 Multi-Step Equations

SWBAT solve multi-step equations in one variable.

Assignments:

HW10

Solve the equations

Solve by *isolating the variable*.

How do you isolate something that is in two places?

1. Draw the wall
2. Are the variables in the same expression? (On the same side?)
3. If yes, simplify the expression.
4. Solve.

- $7x - 3x + 24 = 48$
- $5m + 2(6m - 7) = 91$

Solve the Equations

1. $8 + 10x - 7 = 64$
2. $2x + 4 - 7x = 79$
3. $-x - 20 + 4x + 5 = 18$
4. $8 + 2x - 15 = -\sqrt{17}$
5. $20 - 3x - 1 + 4x = 12$
6. $-5 - 5(-2k - 4) = 85$
7. $-7(3 + 4n) + 7n = -168$
8. $4(3n - 5) + 5n = 0$
9. $\sqrt{2}(3x - \sqrt{2}) + 16 = 15\sqrt{3}$
10. $3 + 2(x - 17) + 5x = -31$

Solve the equations.

- $6x - 4 = 3x + 17$

Solve by isolating the variable.

1. Draw the wall
2. Variables on the same side?
3. If no, get rid of one of them!
4. Solve

- $-5x + 12 = 4x - 18$

1. $-2x - 9 = -x - 12$
2. $1 - n = 10n + 23$
3. $4n - 10 = 3n + 3$
4. $-8h + 6 = -5h$
5. $7x = 14 - 7x$

Solve the equations.

- $7x - 3 = -3 + 7x$
- $13x - 5 = 18 + 13x$

1. $23x - 13x = 10x + 5$
2. $17x + 8 = 17x + 8$
3. $4 - 2x = 4 - 2x$
4. $8 - 6y + 7 = -6y + 4 + 13$

Solve the equations.

(Hint: You may have to simplify the expression(s) first)

1. $12x - 7 = 2(6x + 8)$
2. $4v - 16 = 4(v - 4)$
3. $3(t - 2) = t + 2$
4. $-(h - 25) = h + 25$
5. $-18 + 34c - 9 = 25c + 9c$
6. $6y - 4 = 5y + 200$
7. $2d - 7 - 6d = -4d - 7$
8. $-3x - 12 = -14x + 76$