1.8 Two-Step Equations

SWBAT solve two-step linear equations.

Assignments:

HW09

Review: Solving Equations

- Equation
  - 2 expressions said to be equal
- Solution
  - Value(s) that make an equation TRUE
- Ways to solve equations
  - Guess-and-check
    - Takes too long
  - Isolate the variable
    - Have to "undo" everything attached to it

- Solve.

1. $x - 7 = 18$
2. $\frac{m}{4} = -2$
3. $\frac{2}{7}x = 16$
4. $n + 9 = -4$

$$3x - 4 = 23$$

- What is different about this equation than the other ones we've looked at?

- How do we decide which number to "get rid of" first?
  - Hint: think "backwards"

Order of Operations

Simplify Expressions

- Parentheses
- Exponents
- Multiplication
- Division
- Addition
- Subtraction
- M/D at same time, A/S at same time
- Watch for invisible parentheses!

Solve Equations

- Subtraction
- Addition
- Division
- Multiplication
- Exponents
- Parentheses
- S/A at same time, D/M at same time
- Watch for invisible parentheses!

Solve the equations

- $-2x - 5 = 100$
- $-\frac{x}{2} + 17 = 0$
- $\frac{x-3}{4} = -2$

1. $6x - 5 = 31$
2. $-\frac{x}{4} + 2 = 8$
3. $2x + 7 = 19$
4. $100 = 3x + 1$
5. $12x + 9 = 81$
6. $\frac{x}{2} - 4 = 21$
7. $\frac{x+3}{9} = 1$

Solve the equations

- $10(x - 7) = 210$

- $-3(y - 12) = 27$

1. $7(3x - 1) = 16$
2. $-2(x + 8) = 6$
3. $9(1 - 2x) = 81$
4. $\frac{1}{4}(8x - 16) = 20$
5. $10(x + 8) = 200$

- James was going to sell all of his stamp collection to buy a video game. After selling half of them he changed his mind. He then bought ten more. How many did he start with if he now has 35?

- The Cooking Club made some pies to sell during lunch to raise money for a field trip. The cafeteria helped by donating two pies to the club. Each pie was then cut into five pieces and sold. There were a total of 50 pieces to sell. How many pies did the club make?