

Factoring and Solving Equations

Factoring

Factoring and products are essentially opposite sides of the same coin

- Highest common factor
- Grouping
- Difference Of Two Squares (D.O.T.S.)
- Trinomial

Solving Equations

2 metaphors



Introducing undo / inverse operations

$$\square + 2 = 11$$

$$\square - 6 = 9$$

$$2 + 3 \times \square = 17$$

Mind your language!

$$5x + 2 = 17$$

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

ALWAYS CHECK!

$$2(x+3)-7=19$$

$$5x+9=2x+7$$

$$\frac{x+1}{3}+x=11$$

$$\frac{2x+1}{3}+\frac{x}{2}=x+1$$

Two important special cases:

$$3x+2=2(x+1)+x$$

$$\frac{4x+6}{2}=2(x+1)$$