Factoring

There are 5 different kinds of Factoring:

- **Greatest common factor (GCF)**
- **Factor by grouping ("Pair them up")**
- **Simple Trinomials (Factor by Inspection)**
- **Hard Trinomials (Factor by Austrialian Method)**
- **Special Factors**
  - **Difference of Squares**
  - **Perfect Square Trinomials**

II. Factoring Trinomials:

Type 1: Polynomials of the form $x^2 + bx + c$

- Often referred to as "Simple Trinomials"

Expand each of the following:

(a) $(w + 5)(w - 4)$ $= w^2 - 4w + 5w - 20$ $= w^2 + w - 20$

(b) $(x - 8)(x - 6) = x^2 - 6x - 8x + 48$ $= x^2 - 14x + 48$

Expanding →

← Factoring

Simple Trinomials

- has three terms with the form...

$$ax^2 + bx + c$$

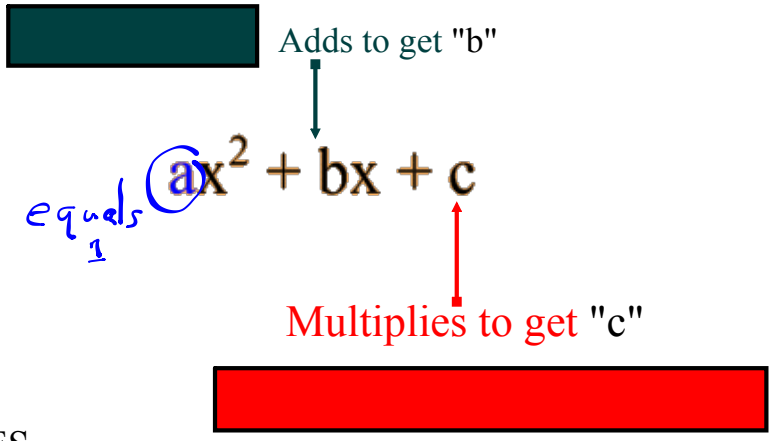
- a simple trinomial has an "a" value of 1.

- we use a method of inspection to factor them.

CHECK IT OUT!!!

INSPECTION METHOD

- here's how it goes... "What two numbers?"



EXAMPLES...

1) $x^2 + 13x - 48$ $16 \times 3 = 48$

$(x - 3)(x + 16)$ $16 + 3 = 13$

$(x - 3)(x + 16)$

SOLUTION

2) $x^2 - 10x - 24$ $2 \times 12 = 24$

$(x + 2)(x - 12)$ $2 + 12 = 10$

$(x - 12)(x + 2)$

SOLUTION

3) $2x^2 - 20x + 42$

$2(x^2 - 10x + 21)$ $\times 21$, $+ -10$

$2(x - 7)(x - 3)$

$2(x - 7)(x - 3)$

SOLUTION

Let's try and factor each of the following trinomials:

$x^2+12x+32$ $\times 32$ $+12$

$(x+8)(x+4)$

$a^2+10a-24$ $\times -24$ $+10$

$(a+12)(a-2)$

$w^2-13w-30$

$(w-15)(w+2)$

$x^2-8x+12$ $\times 12$ $+-8$

$(x-6)(x-2)$

Homework...

Worksheet on Simple Trinomials

Attachments

Factoring trinomials a=1.pdf