

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
- 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 \longrightarrow

\longleftarrow Factoring



Simple Trinomials

- has three terms with the form...

$$ax^2 + bx + c$$

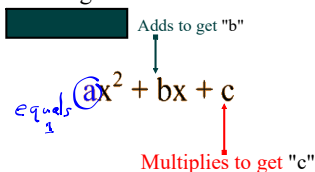
- a simple trinomial has an "a" value of 1.

- we use a method of inspection to factor them.

CHECK IT OUT!!!

INSPECTION METHOD

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



EXAMPLES...

1) $x^2 + 13x - 48$	M -48	
$(x+16)(x-3)$	A 13	$(x-3)(x+16)$
	N +16-3	SOLUTION

2) $x^2 - 10x - 24$	M -24	
$(x-12)(x+2)$	A -10	$(x-12)(x+2)$
	N -12 2	SOLUTION

3) $2x^2 - 20x + 42$	M 21	
$2(x^2 - 10x + 21)$	A -10	$2(x-7)(x-3)$
$2(x-7)(x-3)$	N -7, -3	SOLUTION

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

$x^2 + 12x + 32$	M 32
$(x+8)(x+4)$	A 12
	N 8 4

$a^2 + 10a - 24$	M -24
$(a+12)(a-2)$	A 10
	N 12 -2

$w^2 - 13w - 30$	M = -30
$(w-15)(w+2)$	A -13
	N -15, +2

$x^2 - 8x + 12$	M 12
$(x-6)(x-2)$	A -8
	N -6 -2

Homework...

Worksheet on Simple Trinomials



Attachments

Factoring trinomials a=1.pdf