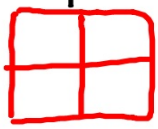
★ Factoring Trinomials

May 24

Steps:
1. Factor out greatest common factor
2. Use FOIL or another method to find the factors
3. Check by mutiplication

Examples: factor completely.

1. $x^2 + 12x + 27$



$(x+9)(x+3)$

$x \cdot x = x^2$; $+9 \cdot +3 = +27$

2. $x^2 - 2x - 24$

$x \cdot x = x^2$; $-6 + 4 = -2$

$(x+4)(x-6)$

3. $4x^2 + 4x - 24$

$4(x^2 + x - 6)$

$4(x+3)(x-2)$

4. $2x^3 - 16x^2 + 30x$

$2x(x^2 - 8x + 15)$

$2x(x-5)(x-3)$

5. $2x^2 + 1x - 1$

$(2x - 1)(x + 1)$

$-1x$

$2x$

6. $7x^2 - 9x + 2$

$(7x - 2)(x - 1)$

$-2x$

$-7x$

7. $3x^2 - 7x - 6$

$(3x + 2)(x - 3)$

$2x$

$-9x$

8. $16x^3 - 20x^2 + 6x$

$2x(8x^2 - 10x + 3)$

$2x(4x - 3)(2x - 1)$

$-6x$

$-4x$