

GCF (greatest common factor):

$$5x^2 - 10x$$

$$5x(x-2)$$

$$12x^5y^3 - 14x^9yz$$

$$2x^5y(6y^2 - 7x^4z)$$

$$5x^2y^4 + 18x^5y^3 + 7x^4y^6$$

$$x^2y^3(3y + 18x^3 + 7x^2y^3)$$

Difference of Two Squares: ① 2 terms ② subtracting ③ perfect squares

$$x^2 - 16$$

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

$$9 - 25y^2$$

$$(3+5y)(3-5y)$$

$$x^8 - 1$$

$$(x^4+1)(x^4-1)$$

$$(x^4+1)(x^2+1)(x^2-1)$$

$$(x^4+1)(x^2+1)(x+1)(x-1)$$

Trinomials: X-Games (a=1)

$$x^2 - 8x - 20$$

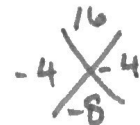
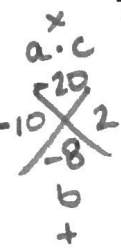
$$(x-10)(x+2)$$

$$x^2 + 15x + 36$$

$$(x+12)(x+3)$$

$$x^2 - 8x + 16$$

$$(x-4)(x-4)$$



Grouping: 4 terms & GCF

$$8x^3 - 64x^2 + x - 8$$

$$4x^3 - 12x^2 - 5x + 15$$

$$12x^3 + 2x^2 - 30x - 5$$

$$8x^2(x-8) + 1(x-8)$$

$$4x^2(x-3) - 5(x-3)$$

$$2x^2(6x+1) - 5(6x+1)$$

$$(8x^2+1)(x-8)$$

$$(4x^2-5)(x-3)$$

$$(2x^2-5)(6x+1)$$

Trinomials (when a ≠ 1): Slip n divide OR Grouping

$$3x^2 - 8x + 4$$

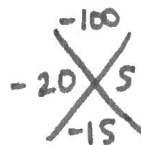
$$4x^2 - 15x - 25$$

$$6x^2 + 7x - 49$$



$$(x-\frac{6}{3})(x-\frac{2}{3})$$

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



$$4x^2 - 20x + 5x - 25$$

$$4x(x-5) + 5(x-5)$$

$$(4x+5)(x-5)$$