

# factoring

**\*\* Always look for a GCF first!\*\***

## GCF

- Take out highest factor each term has in common. If all terms have a variable, choose the lowest exponent.

- $3x^2 + 9$

- $4x^5 - 8x^3 - 12x$

## DOTS

$$(a^2 - b^2) = (a + b)(a - b)$$

- $x^2 - 100$

- $4x^2 - 25$

- $3x^2 - 12$

## Perfect Square Trinomials

$$(a + b)^2 = (a^2 + 2ab + b^2)$$

$$(a - b)^2 = (a^2 - 2ab + b^2)$$

- $x^2 + 12x + 36$

- $4x^2 - 12x + 9$

## Trinomials

- $x^2 - 9x + 14$

- $x^2 - 3x - 40$

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