

FACTORING METHODS

GCF?

Binomial?

Difference/Subtraction (-) of Squares?

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

Find each leg (a and b) by square roots

Difference (-) or Addition (+) of Cubes?

$$a^3 - b^3 = (a - b)(a^2 + ab + b^2)$$

$$a^3 + b^3 = (a + b)(a^2 - ab + b^2)$$

Find each leg (a and b) by cubic roots

****The trinomial of the result is NOT FACTORABLE**

Trinomial $ax^2 + bx + c$?

Try first: Perfect Square?

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

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

Box method: Create box (2x2), fill in first and last term from trinomial, get factors of bx, fill in the other diagonals, do GCF on rows and columns, assemble the binomials () ()

Other methods:

- Guess and Check
- Slide (multiply by a/a the polynomial)
- By Grouping (bx split in the two factors)

4 term polynomial?

Try by "Grouping":
Group in two groups and do GCF first round

Do GCF second round. If it does not work, try different pairs.

Not able to factor?

PRIME

Can you factor again?
-GCF
-Other factoring method?
(Repeat process)