

FACTORING POLYNOMIALS

PURPLE: the format of the expression given

GREEN: the factored form of the expression

RED: what you are going to see in the given expression.

- CHECK for GCF first.
- Identify the # of terms

2 terms

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

Perfect Square - Perfect Square

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

Perfect Square + Perfect Square

3 terms

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

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

PST
Perfect square trinomial

• the 1st and 3rd terms will be Perfect Squares

• the middle term (2nd term) will be 2 times the square roots of the 1st & 3rd terms.

$$ax^2 + bx + c = (\#x + \#)(\#x + \#)$$

TRIM
other trinomial methods

• there are two integers that multiply to ac and add to b .

can use methods like: X, star, box, guess & check, slip/slide/divide, etc

4 terms

DOS
Difference of Squares

SOS
Sum of Squares