



Factoring

There are 5 different kinds of Factoring:

- Greatest common factor (GCF)
- Factor by grouping ("Pair them up")
- Simple Trinomials (Factor by Inspection) $A=1$
- Hard Trinomials $A \neq 1$
- Special Factors
 - Difference of Squares
 - Perfect Square Trinomials

Greatest Common Factor - there is a **G**reatest **C**ommon **F**actor amongst any number of terms in a polynomial

- factor out the GCF from the polynomial and multiply it against the remainder.
- sometimes the GCF may be a polynomial.
ex: common binomial

EXAMPLES...

1) $5x^2 + 25x^3 - 30x^4$ 2) $36x^7y^4 - 16x^3y^5 - 24x^5y^3$ 3) $9x(a-b) - 14y(a-b)$

$5x^2(1+5x-6x^2)$ $4x^3y^3(9xy-4y^2-6x^2)$ $(a-b)(9x-14y)$

EXERCISE: Factor each of the following...

1) $20x+15y-30z$

$5(4x + 3y - 6z)$

2) $25x^7 - 50x^4$
 $25x^4(x^3 - 2)$

3) $12x^3y^2 - 18xy$
 $6xy(2x^2y - 3)$

4) $3x(2x-1) + 5(2x-1)$
 $(2x-1)(3x+5)$

Homework

 GCF Worksheet

Attachments

FactoringGreatestCommonFactor.pdf