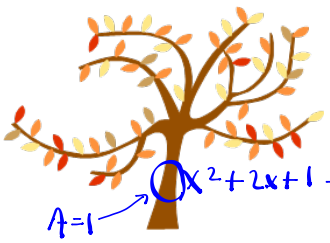
$Ax^2+Bx+C=0$



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 (Factor by Austrailian Method)** $A\neq 1$
- **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) $9x(a - b) - 14y(a - b)$

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

EXERCISE: Factor each of the following...

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

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

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

$\Rightarrow 25x^4(x^3-2)$

$\times 5$

$5x^4(5x^3-10)$

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

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

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

$\times 3$

$3xy(4x^2y-6)$

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

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

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

Homework

GCF Worksheet

Attachments

FactoringGreatestCommonFactor.pdf