

How to Factor Polynomials

Binomial

2 Terms

$$8x + 4$$

↓ GCF

$$4(2x + 1)$$

The factors of $8x + 4$ are:

$$4 \text{ \& } (2x + 1)$$

Trinomial

3 Terms

$a=1$ $x^2 + 6x + 8$

factors

$$(x+2)(x+4)$$

$a \neq 1$ $2x^2 - 1x - 6$

$$2x^2 + 4x \quad -3x - 6$$

↓ GCF ↓ GCF

$$2x(x+2) \quad -3(x+2)$$

Factors

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

Cubic

4 Terms

$$3y^3 + y + 18y^2 + 6$$

$$(3y^3 + y) \quad (+18y^2 + 6)$$

↓ GCF ↓ GCF

$$y(3y^2 + 1) \quad +6(3y^2 + 1)$$

Factors

$$(y+6)(3y^2+1)$$