

GCF?

4 Termed Poly?

Factor by Grouping
 Group 2 & 2
 Factor GCF to get
 binomial GCF
 Binomial GCF factor

Trinomial?

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

$ax^2 + bx + c$

Factor by grouping
 $a \cdot c$ & factor
 factors that sum/diff middle
 rewrite middle w/ 5
 factor by grouping

$x^2 + bx + c$

Traditional
 a 's factors
 c 's factors
 a 's c 's sum to
 middle

c 's factors
 give sum/diff of b
 sum if "+"
 diff if "-"
 middle is telling
 about signs of factors
 "+ c " middle is both
 "- c " higher factor middle

Binomial

Cubes?

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

sum
 $a^3 + b^3$

Squares?

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

Sum
 prime

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