

# Factoring

Always look for a Greatest Common Factor FIRST!!!

## 2 TERMS

(Must be in one of the following forms to factor with two terms)

Difference of Two Perfect Squares

OR

Sum Of Cubes - SOAP

OR

Difference of Cubes - SOAP

## 3 TERMS

(Box Method)

Box Method  
and Rules for Signs

Last sign positive... both get middle sign.  
Last sign negative... check the O.I. in F.O.I.L

## 4 TERMS

(Grouping)

Group first two and last two terms and see if each pair has a G.C.F. (May need to change order of the terms)

THEN

If the G.C.F. of each pair results in a common binomial, factor out the binomial..

THEN

Write the binomial times the binomial created by the terms left when GCF. binomial was pulled out.

1. If **nothing** can be done to the original expression, then it is **PRIME** 2. Check to see if any of your final answers **will factor further**. 3. When it is written as a product of primes, the polynomial is **COMPLETELY FACTORED**.