I. Factoring Checklist (p.417):

1. Common factor?
   use the distributive property,  \( ax \pm ay = a(x \pm y) \)

2. Binomial?
   Difference of 2 squares,  \( a^2 - b^2 = (\_+\_)(\_ - \_) \)
   Sum of 2 squares,  \( a^2 + b^2 \) is prime (i.e., not \________)  
   Sum or difference of 2 cubes,  
   \( a^3 \pm b^3 = (a \pm b)(a^2 \mp ab + b^2) \)

3. Trinomial?
   i.  \( x^2 + bx + c = (x + m)(x + n) \)
      \( m \& n \) are factors of “c” whose sum is “b”
   ii.  \( ax^2 + bx + c = (px + m)(rx + n) \)
       reverse the FOIL method...
       factor “a” & “c” to obtain First & Last products
       then check the middle term  \( b = \text{Outside} + \text{Inside} \)
I. Factoring Checklist (continued):
   4. Four (or more) terms
      use group factoring, not covered (6.1/p.388)

II. Examples (p.420): Problems #2,6,20,32,38

III. More Examples (p.420): Problems #14,26,48

HW: pp.420-421 / Problems #1,3,5,7,11,13,19,25,  
    31,35,37,39,47,53,  
    57,61,69,71,73

Read pp.423-427 (section 6.6)