

I. Factor: $ax^2 + bx + c$ (when $a = 1$, see section 6.2)

II. Factor: $ax^2 + bx + c$ (when $a \neq 1$, see section 6.3)

$$ax^2 + bx + c = (px + m)(rx + n)$$

find four numbers m, n, p & q

such that: $pr = a$, $np + mr = b$ & $mn = c$

F **O** + **I** **L**

e.g., factor “ $6x^2 + 17x + 12$ ”

$a = \underline{\hspace{1cm}}$, $b = \underline{\hspace{1cm}}$, $c = \underline{\hspace{1cm}}$

factors of 6 are $\underline{\hspace{1cm}}$, $\underline{\hspace{1cm}}$, $\underline{\hspace{1cm}}$ and $\underline{\hspace{1cm}}$

factors of 12 are $\underline{\hspace{1cm}}$, $\underline{\hspace{1cm}}$, $\underline{\hspace{1cm}}$, $\underline{\hspace{1cm}}$, $\underline{\hspace{1cm}}$ and $\underline{\hspace{1cm}}$

need to find four numbers/factors such that...

$p \cdot r = 6$, $m \cdot n = 12$ and $n \cdot p + m \cdot r = \underline{\hspace{1cm}}$

try $(2x + m)(3x + n)$ with $m = \underline{\hspace{1cm}}$ and $n = \underline{\hspace{1cm}}$

FOIL $(2x + 3)(3x + 4) = 6x^2 + \underline{\hspace{1cm}} + \underline{\hspace{1cm}}$

III. Examples (p.406): Problems #2,8,10,**16**,24,34,
36,40,42

IV. Application (p.407): Problem #**66**

HW: pp.406-407 / Problems #1-13(every other odd),
19,29,31,35,39-51(odd),61,63,65

Read pp.409-413 (section 6.4)