MATH 1010 ~ Intermediate Algebra

Chapter 5: POLYNOMIALS AND FACTORING

Section 5.5: Factoring Trinomials

Objectives:

- ✲ Recognize and factor perfect square trinomials.
- ✲ Factor Trinomials of varying forms.
- ✲ Factor polynomials using guidelines for factoring.

$x^2-6x+9 = (\quad)(\quad)$

$x^2+3x-4 = (\quad)(\quad)$

$6x^3 + 27x^2 - 15x = (\quad)(\quad)$

Perfect Square Trinomials

$u^2 + 2uv + v^2 = (u+v)^2$

$u^2 - 2uv + v^2 = (u-v)^2$

① EXAMPLES:

a) $x^2 - 4x + 4$

b) $9x^2 - 30xy + 25y^2$

c) $16x^3 + 80x^2 + 100x$

② EXAMPLE:
Factor these.

a) $x^2 - x - 20$

b) $x^2 - 17x - 18$

c) $x^2 + 5x + 4$

③ EXAMPLE:
Factor these.

a) $4x^2 + 5x - 6$

b) $2x^2 - x - 3$

c) $6x^2 + 19x + 10$

④ EXAMPLE:
Factor these.

a) $-3x^2+16x+35$

b) $4x^3-32x^2+64x$

c) $x^3-3x^2-4x+12$