Lesson Plan

Grade 10 Academic Math **Lesson: 4 - 4**

Unit: Quadratic Relations **Topic: Expanding Quadratic Expressions**

- ***homework check:*** **Principles of Mathematics 10 p. 155 # 2 – 6, 10, 12, 13, 15**

- ***note:*** **Expanding Quadratic Expressions**

Recall that expanding quadratic expressions makes use of the distributive property and the acronym "FOIL" when expanding binomials. For example,

a) $(x+5)(x-8) =$

$= x^2 - 8x + 5x - 40$

$= x^2 - 3x - 40$

b) $(2x-3)(3x+2) =$

$= 6x^2 + 4x - 9x - 6$

$= 6x^2 - 5x - 6$

c) $3(5x+2)(x-4) =$

$= 3\left[5x^2 - 20x + 2x - 8\right]$

$= 3\left[5x^2 - 18x - 8\right]$

$= 15x^2 - 54x - 24$

d) $-(2x-y)(5x-3y) =$

$= -\left[10x^2 - 6xy - 5xy + 3y^2\right]$

$= -\left[10x^2 - 11xy + 3y^2\right]$

$= -10x^2 + 11xy - 3y^2$

Also recall that the value of ***a*** gives us the direction of opening. Looking back at our examples above, which parabolas open up? Open down?

- ***homework assignment:*** **Principles of Mathematics 10 p. 165 # 1 , 8 – 12, 15**