Today's Learning Goal(s):

First QUIZ 2 FACTORING

By the end of the class, I will be able to:

a) factor trinomials of the form $ax^2 + bx + c$

Yesterday's homework
pp. 240-241 #3cf, 4cf, 5cf, 6b, 7cef, 8d, 9d, 11d

No Handout Today or Tomorrow; see website.

$-1+6=5$

$-2+3=1$

P241 5f) r^2+2r-6

$=(r+\quad)(r-\quad)$

DNF

7c) $5z^2+40z+60$

$=5(z^2+8z+12)$

$=5(z+2)(z+6)$

1 12
+2 +6
3 4

$=x^2-6x-16$

11d) $x^2-6xy-16y^2$

1 -16
+2 -8 $=-6$

$=(x-8y)(x+2y)$

MPM 2DI 5.5 Factor Quadratic Expressions of the Form $ax^2 + bx + c$ (Day 1)

Date: Apr. 27/16

Warm-up: Expand and simplify.

a) $(2x+3)(3x+5)$ $=6x^2+10x+9x+15$ $=6x^2+19x+15$

b) $(x+3)(6x+5)$ $=6x^2+5x+18x+15$ $=6x^2+23x+15$

c) $(3x-5)(2x+3)$ $=6x^2+9x-10x-15$ $=6x^2-x-15$

d) $(2x-5y)(x-3y)$ $=2x^2-6xy-5xy+15y^2$ $=2x^2-11xy+15y^2$

Ex.1 Factor fully, if possible. ***Method 1***: The "A,C Chart"

a) $6x^2+19x+15$

A: 1 6 → 2 3 ✓ C: 1 15 → 3 5 ✓

$=(2x+3)(3x+5)$

$2\times 5 + 3\times 3 = 10+9 = 19$

$(2x+3)$, $(3x+5)$

b) $6x^2-x-15$

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

A: 1 6 → 2 3 C: 1 15 → 3 5

$2\times -5 + 3\times 3 = -10+9 = -1$

$2\times -3 + 3\times 5 = 10-9 = 1$

$(2x+3)$, $(3x-5)$

$6-15 = -9$

Ex.2 Factor fully, if possible.

a) $5x^2 - 23x + 12$

1 5 1 12 2 6 3 4

$=(5x-3)(x-4)$

$1x - 3$, $5x - 4$

$=-4-15$

$=-19$

$(1x-4)$, $(5x-3)$

$-20-3$

$=-23$

b) $10x^2 + 39x + 14$

1 10 1 14 2 5 2 7

$=(2x+7)(5x+2)$

$(2 \quad 7)$, $(5 \quad 2)$

$35+4$

c) $6x^2 + 13xy - 15y^2$

1 6 1 15 2 3 3 5

$=(x+3y)(6x-5y)$

$2 \quad 3$, $3 \quad -5$

$-10+9$

$=-1$

$1 \quad -3$, $6 \quad 5$

$=5-18$

$=-13$

d) $10x^2 - 33x - 7$

1 10 2 5 | 1 7

$=(2x-7)(5x+1)$

$2 \quad -1$, $5 \quad 7$

$14-5$

$=9$

$2 \quad -7$, $5 \quad 1$

$=2-35$

$=-33$

Today's entertainment: p.246 #2, 3, 4

***Enrichment*:** p. 247 #17, 18