Math 250 Day 2 lecture problems

TEACHING FACTORING

1. Factor using *ac-method*:

   a. $52x^2 - 5x - 2$

   b. $42x^2 + 11x - 5$

ALGEBRA TILES!

2. Draw an algebra tile diagram to model the following multiplications:

$(3x - 2) \cdot (x + 2)$

(3x-1)(3x-1)

3. Draw an algebra tile diagram to model the following rational expression computations (use colored pens or pencils to indicate + or - tiles):

$$\frac{2x^2 - 3x - 2}{x - 2}$$

$$\frac{6x^2 - x - 1}{3x + 1}$$

4. Solve the following equations by completing the square with tile diagrams:

   a. $x^2 - 6x = -8$

   b. $x^2 + 4x = 7$

a) $ax^2 + bx + c = 0$ (proof of quadratic formula with algebra tiles!)

XY-tiles

5. Draw a labeled *xy*-tile diagram to solve: $\frac{2x^2-2y^2-3xy+5x+5y-3}{2x+y-1}$