

8.4

2/13/15 (C) I can factor ax^2+bx+c by decomposition.

Ex: (1) $4x^2 + 4x - 3$

$$4x^2 - 2x + 6x - 3$$

$$2x(2x-1) + 3(2x-1)$$

$$(2x-1)(2x+3)$$

(1) Multiply a and c

$$4(-3) = -12$$

$$-12, 1$$

$$12, -1$$

$$(6, -2)$$

factors must
add up to
b

(2) Replace b with the two factors.

(2) $6x^2 + 11x + 4$ 6(4)

$$6x^2 + 3x + 8x + 4$$

$$3x(2x+1) + 4(2x+1)$$

$$(2x+1)(3x+4)$$

(3) $2x^2 - 7x - 4$ 2(-4)

$$2x^2 - 8x + x - 4$$

$$2x(x-4) + 1(x-4)$$

$$(x-4)(2x+1)$$