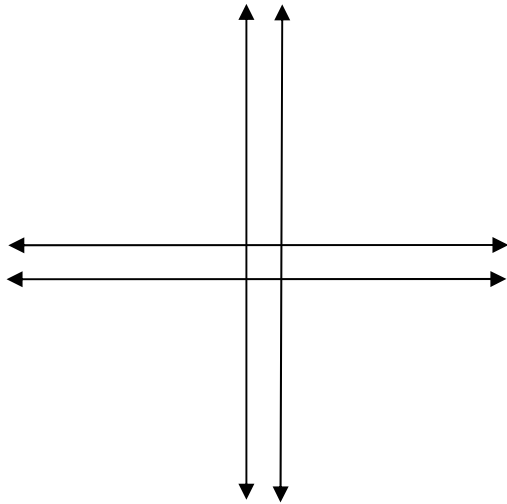


Alg 7.8

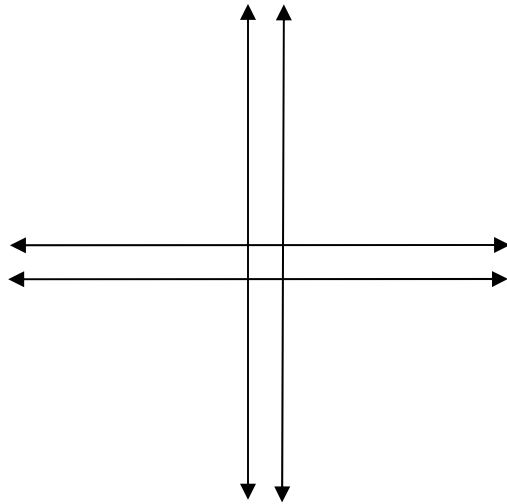
Factoring Practice I ($x^2 + bx + c$)

1) Build the trinomial areas and factors. DRAW the first 4 problems.

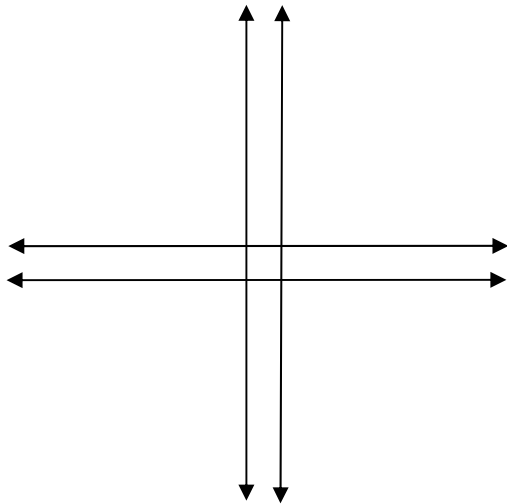
a) () () = $x^2 + 8x + 12$



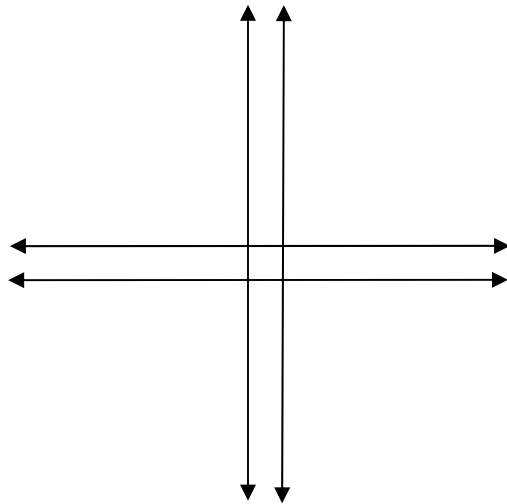
b) () () = $x^2 + 8x + 7$



c) () () = $x^2 + 5x + 6$



d) () () = $x^2 + 5x + 6$



2) Factor the following trinomials. If you get stuck, use the algebra blocks to help.

e) () () = $x^2 + 13x + 42$

f) () () = $x^2 + 12x + 35$

g) () () = $x^2 + 10x + 21$

h) () () = $x^2 + 21x + 108$

i) () () = $x^2 + 15x + 50$

j) () () = $x^2 + 30x + 125$

k) () () = $x^2 + 11x + 28$

l) () () = $x^2 + 12x + 27$

3) The following trinomials are special. See if you can find the pattern. Explain below. Then find out the name used for these kind of trinomials. Write below.

m) () () = $x^2 + 6x + 9$

n) () () = $x^2 + 12x + 36$

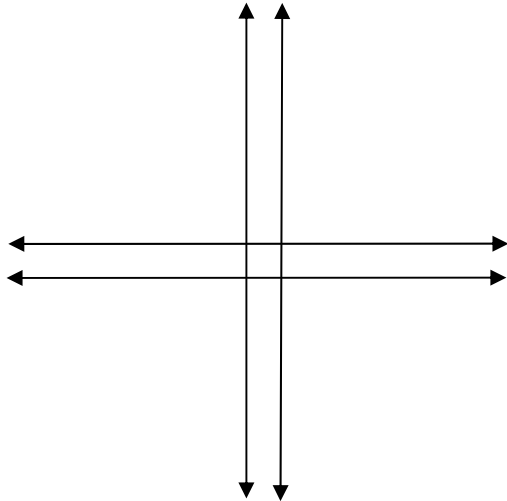
o) () () = $x^2 + 10x + 25$

p) () () = $x^2 + 24x + 144$

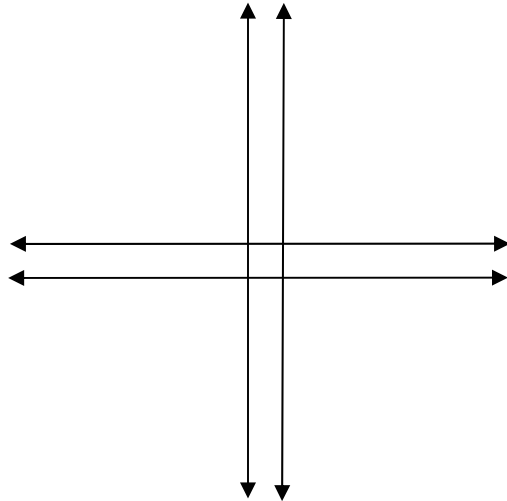
Factoring Practice II ($x^2 - bx + c$)

1) Build the trinomial areas and factors. DRAW the first 4 problems.

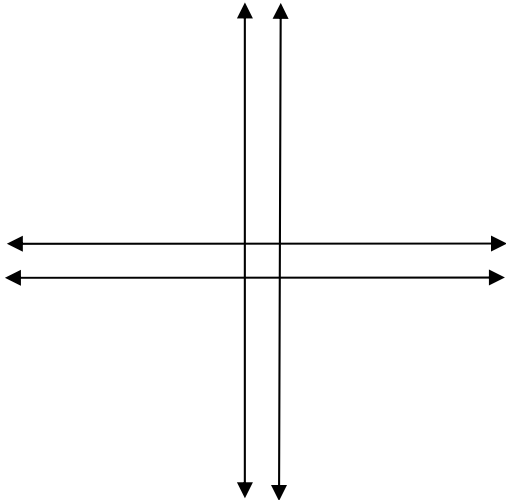
a) () () = $x^2 - 8x + 12$



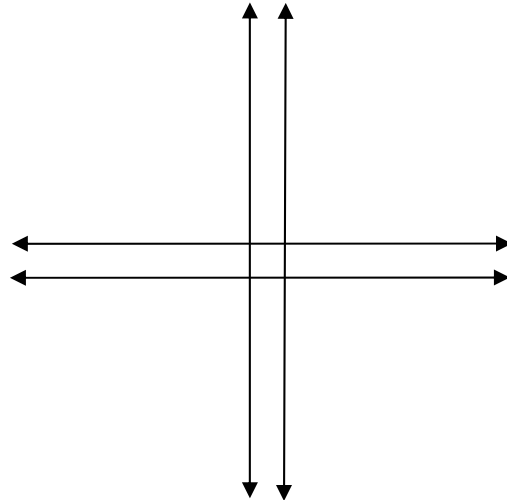
b) () () = $x^2 - 6x + 8$



c) () () = $x^2 - 5x + 6$



d) () () = $x^2 - 6x + 9$



2) Factor the following trinomials. If you get stuck, use the algeblocks to help.

e) () () = $x^2 - 13x + 40$

f) () () = $x^2 - 12x + 27$

g) () () = $x^2 - 10x + 21$

h) () () = $x^2 - 9x + 18$

i) () () = $x^2 - 19x + 90$

j) () () = $x^2 - 28x + 75$

k) () () = $x^2 - 15x + 44$

l) () () = $x^2 - 21x + 54$

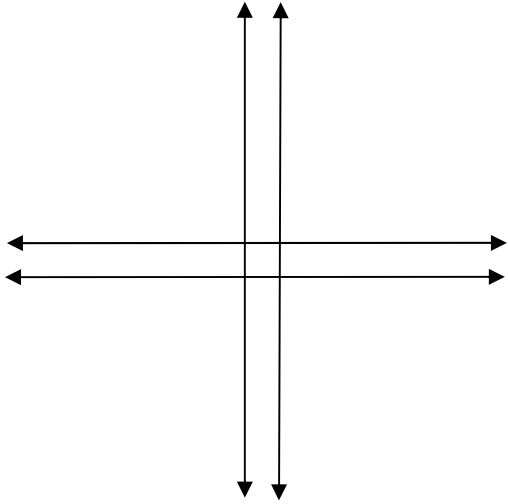
m) () () = $x^2 - 26x + 169$

n) () () = $x^2 - 16x + 64$

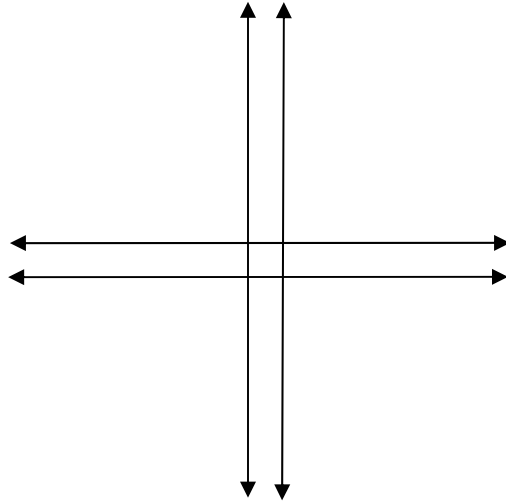
Factoring Practice III ($x^2 + bx - c$)

1) Build the trinomial areas and factors. DRAW the first 4 problems.

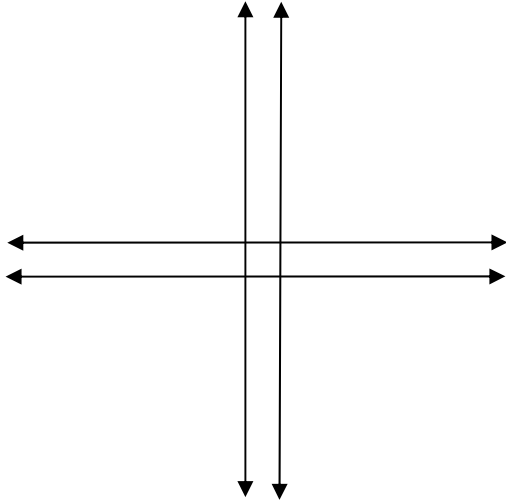
a) $(\quad)(\quad) = x^2 + x - 6$



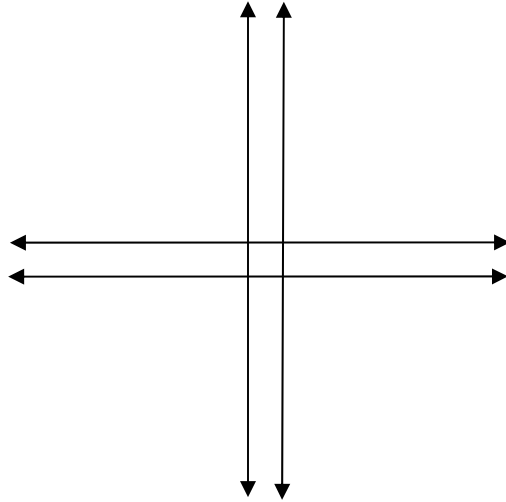
b) $(\quad)(\quad) = x^2 + 7x - 8$



c) $(\quad)(\quad) = x^2 + 5x - 6$



d) $(\quad)(\quad) = x^2 + 2x - 8$



2) Factor the following trinomials. If you get stuck, use the algeblocks to help.

e) $(\quad)(\quad) = x^2 + 3x - 40$ f) $(\quad)(\quad) = x^2 + 6x - 27$

g) $(\quad)(\quad) = x^2 + 4x - 21$ h) $(\quad)(\quad) = x^2 + 7x - 18$

i) $(\quad)(\quad) = x^2 + x - 90$ j) $(\quad)(\quad) = x^2 + 22x - 75$

3) The following trinomials are special—they are called difference of squares trinomials. See if you can find the pattern. Explain below.

k) $(\quad)(\quad) = x^2 - 4$ l) $(\quad)(\quad) = x^2 - 16$

m) $(\quad)(\quad) = x^2 - 25$ n) $(\quad)(\quad) = x^2 - 64$

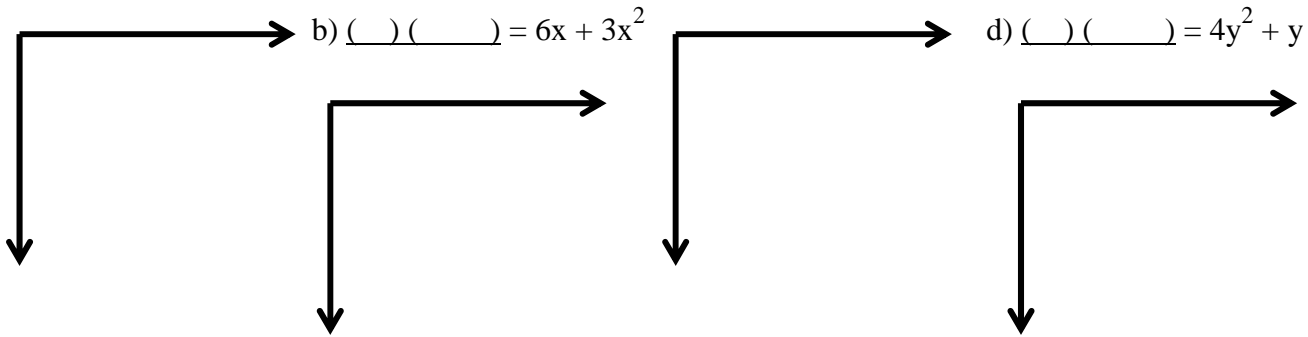
o) $(\quad)(\quad) = x^2 - 36$ p) $(\quad)(\quad) = x^2 - 100$

Factoring Practice IV (Reverse distribution—taking out a common factor) (from binomials and trinomials)

1) Build the rectangle areas and factors. Draw.

a) $(\quad)(\quad) = 6x + 2$

c) $(\quad)(\quad) = 4xy + x^2$



2) Continue factoring (reverse distribute) with or without creating an area model first.

e) $(\quad)(\quad) = 6x - 3x^2$

f) $(\quad)(\quad) = -6x + 2$

g) $(\quad)(\quad) = 4xy - x^2$

h) $(\quad)(\quad) = -4y^2 + y$

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

j) $(\quad)(\quad) = xy^2 + 3y^2$

3) Practice factoring trinomials (when the result is three factors).

Step 1: Reverse distribute if possible—take out a common factor.

Step 2: Factor the trinomial.

Step 3: Write the three factors.

k) $2x^2 + 10x + 12 = (\quad)(\quad) = (\quad)(\quad)(\quad)$

l) $x^3 + 7x^2 + 6x = (\quad)(\quad) = (\quad)(\quad)(\quad)$

m) $3x^3 + 12x^2 + 9x = (\quad)(\quad) = (\quad)(\quad)(\quad)$