First Quiz 5·1 (on expanding)

Today's Learning Goal(s):

Knowledge Hook?

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

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

No Handout for the next few days; see website.

Any questions from last 2 day's homework?

pp. 234-235 #3, 4, 5*, 6

*answer for 5c is wrong

***Enrichment*:** pp. 234-235 7d, 12, 15

Done (Fall 2016)

pp. 240-241 #3ab, 4ab, 5dg, 6a, 7ab, 8ab, 9ab, 11ab

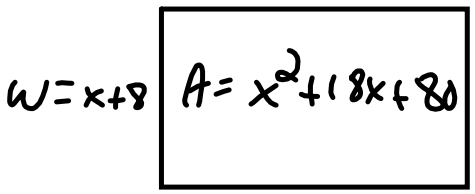
***Enrichment*:** p. 241 #15b, 17b

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

SWYK 5.2 Tomorrow

(on factoring)

p.240 6a)



$A = x^2 + 18x + 80$

$= (x + 8)(x + 10)$

if $x = 15$

$\ell = x + 10 = 15 + 10 = 25$

$w = x + 8 = 15 + 8 = 23$

8a) $x^2 + bx + 12$

if $b = 13$

then

$(x + 12)(x + 1)$

$b = 7$

$(x + 3)(x + 4)$

b) $x^2 - bx + 4$

if $b = 5$ $\left\{ x^2 - 5x + 4 \right.$

$(x - 1)(x - 4)$

$\therefore b = 4$

$(x - 2)(x - 2)$

p.241 #11

a) $a^2 + 16ab + 24b^2$

$\leftrightarrow a^2 + 11a + 24$

$= (a + 8)(a + 3)$

$= (a + 8b)(a + 3b)$

$a^{26} + 11a^{13} + 24$

$= (a^{13} + 8)(a^{13} + 3)$

b) $k^2 - 11km + 18m^2$

$\leftrightarrow k^2 - 11k + 18$

$= (k \quad)(k \quad)$

$= (k - 9m)(k - 2m)$

MPM 2DI 5.4 Factor Quadratic Expressions of the Form $x^2 + bx + c$ (Day 2)

Ex.1 Factor completely. Date: Nov. 14/16

a) $x^2 + 12x + 20$

$=(x+2)(x+10)$

1 20
2 10
4 5

b) $x^2 + 7x - 18$

$=(x+9)(x-2)$

$-1 + 18$
$-2 + 9$
$-3 + 6$

c) $x^2 - 10x - 24$

$=(x-12)(x+2)$

$1 - 24$
$2 - 12$
$3 - 8$
$4 - 6 = -2$

d) $x^2 - 19x + 60$

$=(x-4)(x-15)$

1 60
2 30
3 20
4 15
5 12
6 10
7
8
9

e) $-x^2 + 7x - 12$

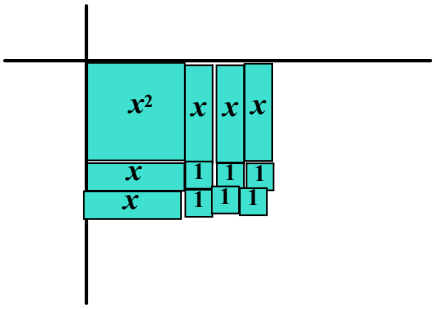
$=-1(x^2 - 7x + 12)$
$=-(x-4)(x-3)$

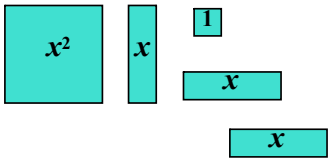
f) $4x^2 - 12x - 40$

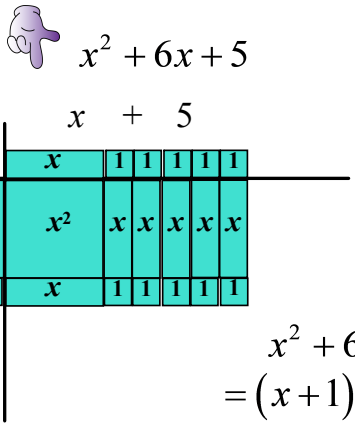
$=4(x^2 - 3x - 10)$
$=4(x-5)(x+2)$

Ex.2 Let's try factoring using algebra tiles. (see Investigate A p.236)

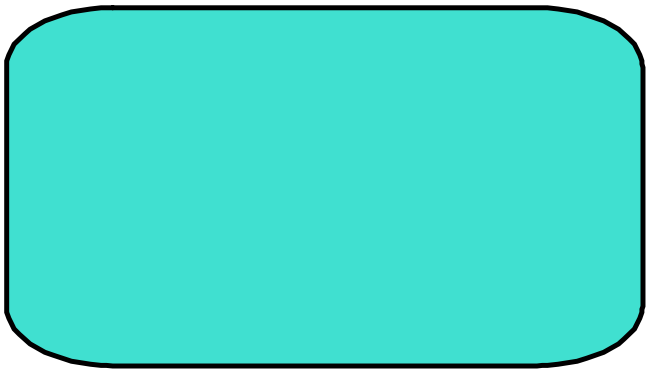
a) $x^2 + 6x + 5$ First, create a rectangle.
You need to use 5 of the 1's, and 6 of the x bars,
but some could be *horizontal*, and some could be *vertical*.



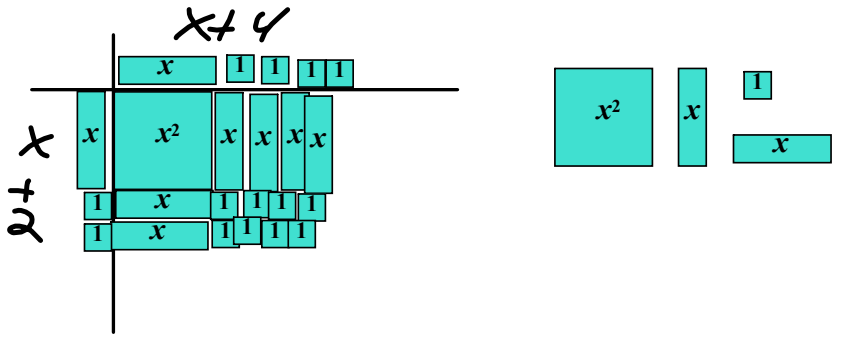




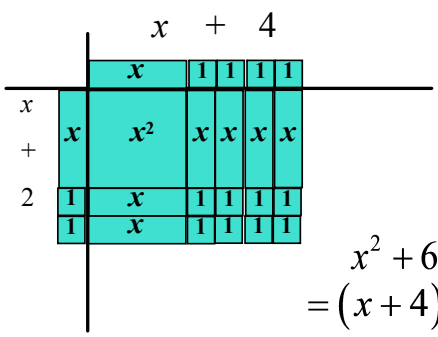
$$x^2 + 6x + 5 = (x+1)(x+5)$$

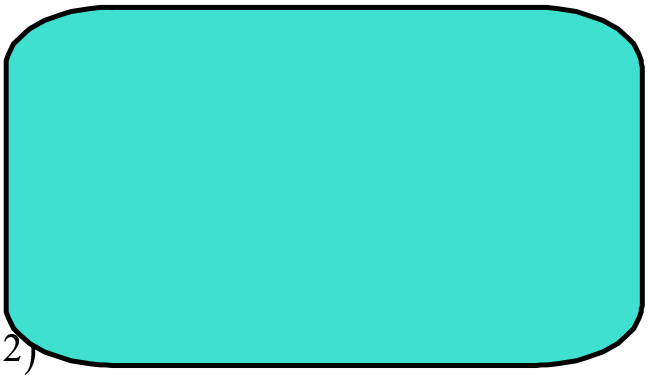


b) $x^2 + 6x + 8$ First, create a rectangle.
You need to use **8** of the 1's, and 6 of the x bars,
but some could be *horizontal*, and some could be *vertical*.



$x^2 + 6x + 8$





$x^2 + 6x + 8$
$= (x + 4)(x + 2)$

Today's practice:

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

SWYK 5.2 Tomorrow

(on factoring)