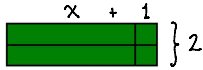
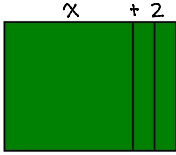
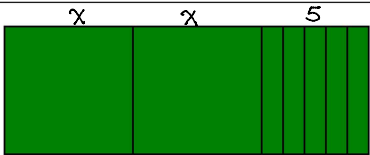
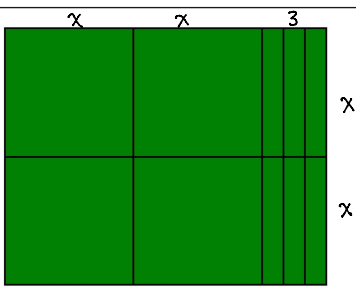


# Distributive Property

## The Distributive Property

Rectangle	Width	Length	Area	Equation
	2	$x + 1$	$2x + 2$	$2(x + 1) = 2x + 2$
	$x$	$x + 2$	$x^2 + 2x$	$x(x + 2) = x^2 + 2x$
	$x$	$2x + 5$	$2x^2 + 5x$	$x(2x + 5) = 2x^2 + 5x$
	$2x$	$2x + 3$	$4x^2 + 6x$	$2x(2x + 3) = 4x^2 + 6x$

**The distributive property:**

$$**$a(x + y) = ax + ay$**$$

Expand: a)  $3(x + 2)$   
 $= 3x + 6$

b)  $-5(4m - 3)$   
 $= -20m + 15$

c)  $(2y + 5)(-4) = (-4)(2y + 5)$   
 $= -8y - 20$

d)  $2(5a^2 - 7a + 2)$   
 $= 10a^2 - 14a + 4$

e)  $x(x - 3)$   
 $= x^2 - 3x$

f)  $p(p^2 - 2p + 1)$   
 $= p^3 - 2p^2 + p$

Expand and simplify:

a)  $-4(x + 3) + 2(2x - 1)$   
 $= -4x - 12 + 4x - 2$   
 $= -14$

b)  $3m(m - 5) - 1(2m^2 - m)$   
 $= 3m^2 - 15m - 2m^2 + m$   
 $= m^2 - 14m$

c)  $\frac{1}{2}(2w - 6) - \frac{2}{3}(9w - 6)$   
 $= w - 3 - 6w + 4$   
 $= -5w + 1$

**Assignment: p.268 #3 – 5, 8, 12, 14, 16, 18**