

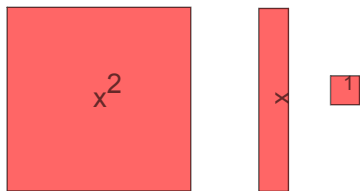
Distributive Property

Oct 5/2015

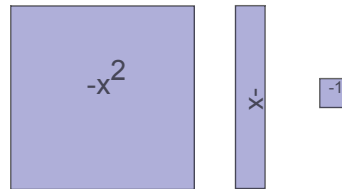
When you use the distributive property, it is also called expanding.

Method 1: Area model using algebra tiles

There are 3 different shapes.

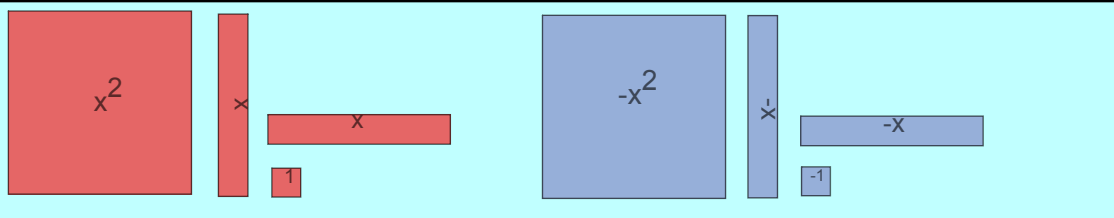


Red tiles are positive



Blue tiles are negative

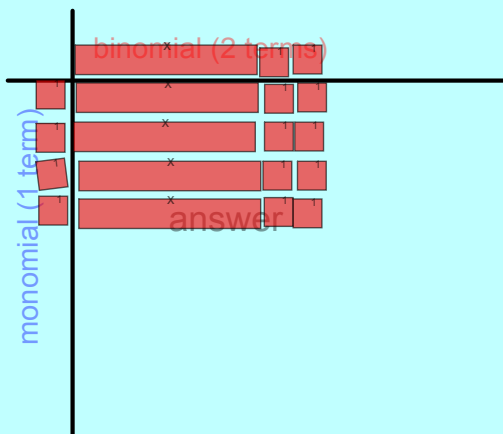
Feb 24-9:41 AM



To multiply a monomial times a binomial, set up an area with the tiles

Ex.  $4(x+2)$

$= 4x + 8$



Mar 25-8:02 AM

$x^2$     $x$     $x$     $1$     $-x^2$     $-x$     $-1$

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Ex.  $-2x(x - 1)$   
 $= -2x^2 + 2x$

$-x^2$     $x$   
 $-x^2$     $x$

Mar 25-8:02 AM

$x^2$     $x$     $x$     $1$     $-x^2$     $-x$     $-1$

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Ex.  $-3(2x^2 + 4)$   
 $= -6x^2 + (-12)$   
 $= -6x^2 - 12$

$-6x^2 + -12$   
 (c!)

$x^2$     $x^2$   
 $-x^2$     $-x^2$   
 $-x^2$     $-x^2$   
 $-x^2$     $-x^2$

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Method 2: Algebraically

Multiply the monomial by each term in the binomial.

Ex.  $4(-2x+3) = -8x + 12$

Hint: Remember order of operations. Expand and simplify the inner bracket first, then do the outer bracket.

Ex.  $5x[3x - 2(-1x + 6)]$

*do this first!!*

$$= 5x[3x + 2x - 12]$$
$$= 5x[5x - 12]$$
$$= +25x^2$$

Feb 24-9:56 AM

Consider:

A gift bag contains 2 chocolate bars and 5 balloons.

How many chocolate bars and balloons are there in:

1 gift bag?

5 gift bags?

10 gift bags?

Oct 4-5:24 PM

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Oct 4-5:24 PM

Assigned Work:

p.166 # 3 - 8 (a,c,e for each), (12, 13, 15) bcd

7ace  
8ca

$$7(a) \quad 2(a^2 + 5a + 3)$$

$$= 2a^2 + 10a + 6$$

$$8(a) \quad 3(x+2) + 4(x-5)$$

$$= 3x + 6 + 4x - 20$$

$$= 3x + 4x + 6 - 20$$

$$= 7x - 14$$

Feb 24-9:57 AM

12.  $A = \frac{1}{2}(a+b)h$

$= \frac{1}{2} \times (a+b) \times h$

$= (\frac{1}{2}a + \frac{1}{2}b) \times h$  ✓

$A = \frac{1}{2}(a+b)h$

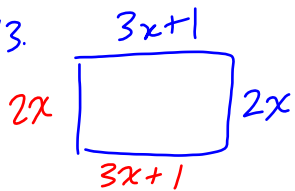
$= \frac{1}{2}(ah+bh)$  ✓

$= \frac{ah+bh}{2}$  ✓

$= \frac{1}{2}ah + \frac{1}{2}bh$  ✓

$= \frac{ah}{2} + \frac{bh}{2}$  ✓

Oct 6-10:33 AM

13. 

(a)  $P \rightarrow$  add all sides

$P = 2(2x) + 2(3x+1)$

$= 4x + 6x + 2$

$= 10x + 2$

(b)  $A \rightarrow$  length  $\times$  width

$A = (3x+1)(2x)$

or

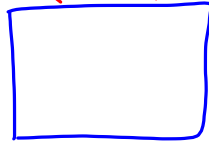
$A = 2x(3x+1)$

$= 6x^2 + 2x$

Oct 6-10:41 AM

13. (c)

$$3(3x+1) = 9x+3$$



$$(2x)(3) = 6x$$

$$P = 2(9x+3) + 2(6x)$$

⋮

$$A = l \times w$$

$$= (9x+3)(6x)$$

⋮

Oct 6-10:47 AM