

# **Chapter 5 Test**

**Friday, January 13, 2017**

**Final test of the semester!**

January 10, 2017

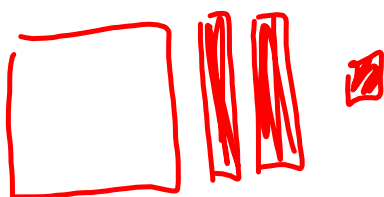
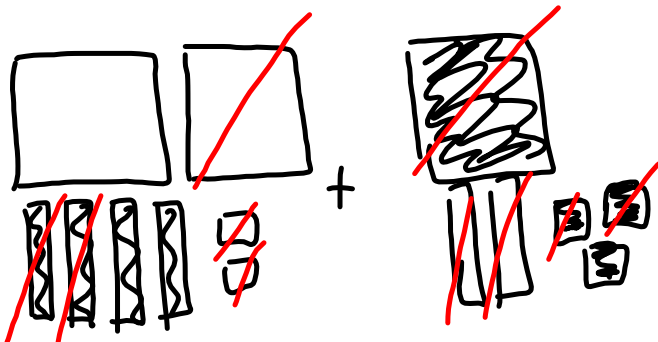
Warm-Up

1.	<u>Classify</u> Monomial, Binomial or Trinomial?	any # in front variable Coefficient[s]	highest exponent Degree	a number Constant
<b>Polynomial</b>				
A. $4x - 3$	Binomial	4	1	-3
B. $-3x^2 + 4x + 7$	trinomial	-3, 4	2	7
C. $3x$	monomial	3	1	none
D. $-4$	monomial	none	none	-4
E. $2x^2 - x + 4$	trinomial	2, -1	2	4 *

2. Use algebra tiles to show how you would simplify the following... draw algebra tiles for each part of the question and the final answer!

Algebra Tiles

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



Grouping like  
Terms

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

$$2x^2 - 4x + 2 - 1x^2 + 2x - 3$$

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

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

Simplify [remember...question, group, simplify]

$$4x^2 - 3x + 2 - 4x - 6x^2 - 5$$


$$\textcircled{4}x^2 - \textcircled{6}x^2 \boxed{-3}x \boxed{-4}x \boxed{+2-5}$$

$$-2x^2 - 7x - 3$$

$$\boxed{-5+2}$$

Add the following...show your steps!

- 1) Remove the brackets
- 2) Group
- 3) Simplify

$$(-3x^2 - 7x + 2) + (-x^2 - 6x - 3)$$


$$-3x^2 - 7x + 2 - x^2 - 6x - 3$$

$$(-3x^2 - 1x^2 - 7x - 6x + 2 - 3)$$

$$-4x^2 - 13x - 1$$

Subtract the following...show your steps!

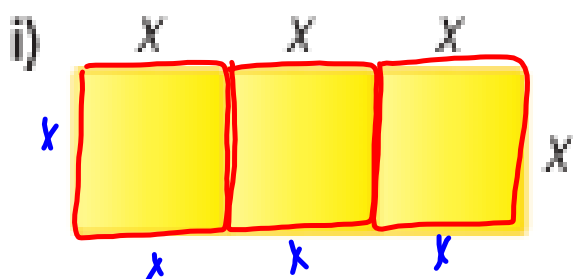
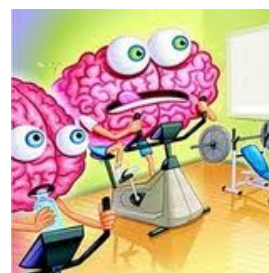
$$(2x^2 - 4x + 2) - (-x^2 + 2x - 3)$$

$$2x^2 - 4x + 2 + 1x^2 - 2x + 3$$

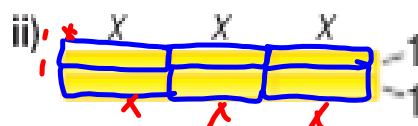
$$\textcircled{2}x^2 + \textcircled{1}x^2 \boxed{-4x} \boxed{-2x} \boxed{+2+3}$$

$$3x^2 - 6x + 5$$

# Using Polynomials to represent perimeter

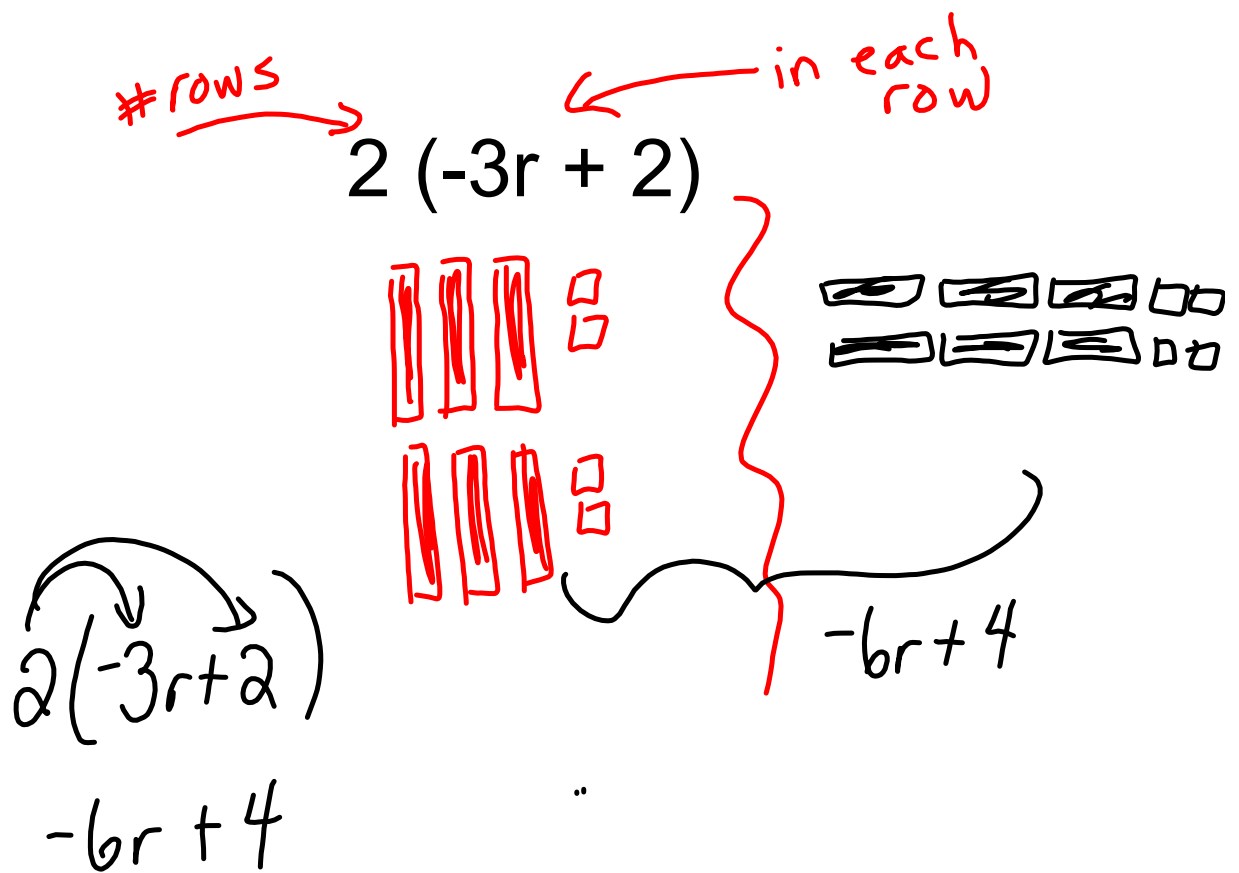


$$P = 8x$$



$$P = 6x + 4$$

Model the following:



$$\text{A. } -4(3x^2 + 5x - 3)$$

$$-12x^2 - 20x + 12$$

$$\text{B) } \frac{-12x^2 + 4x - 16}{4}$$

$$\frac{-12x^2}{4} + \frac{4x}{4} - \frac{16}{4}$$

$$-3x^2 + 1x - 4$$

$$\text{C. } \frac{-4(x^2 + 8x - 16)}{2}$$

$$\frac{-4x^2 - 32x + 64}{2}$$

$$\frac{-4x^2}{2} - \frac{32x}{2} + \frac{64}{2}$$

$$-2x^2 - 16x + 32$$



## Section 5.6 Multiplying and Dividing a Polynomial by a Monomial

# Remember Laws of Exponents

When Multiplying---Base is the same ADD the exponent  
[variable]

$$a) \quad 3(2r) = 6r$$

$$b) \quad (3r^1)(2r^1) = 6r^2$$

$$c) \quad (3r^2)(4r^1) = 12r^3$$

$$c. \quad (2c)(-4c) = -8c^2$$

Determine the product


A.  $2x(3x + 4)$   
 $6x^2 + 8x$

B.  $-2x(-3x - 4)$   
 $6x^2 + 8x$

c)  $-2(3x - 5)$   
 $-6x + 10$

d)  $3x(2x^2 - 4x + 3)$   
 $6x^3 - 12x^2 + 9x$

Determine the product

$$8x (2x - 3y)$$

$$16x^2 - 24xy$$

Dividing a Monomial and a Binomial by a Monomial  
 base is same subtract the exponents

A.  $\frac{-10m^2}{2m^1}$   $\left[ \frac{-10m^1}{2m} \right]$   
 $-5m$

B.  $\frac{30k^2 - 18k}{-6k}$

$$\frac{30k^2}{-6k} - \frac{18k}{-6k}$$

$$-5k + 3$$

C.  $\frac{-6r^2 + 4r}{2r}$

$$\frac{-6r^2}{2r} + \frac{4r}{2r}$$

$$-3r + 2$$

Determine the quotient

$$\frac{24x^2 + 6xy}{3x}$$

$$\frac{24x^2}{3x} + \frac{6xy}{3x}$$

$$8x + 2y$$

Homework

Pg 256

#10 [a], #11, #12, #16,

#20 [a,c,e], #21 [a, c,e]

