

# Warm Up

Copy warm-ups into your notebooks

1) Classify the following as either monomials, binomial, trinomial or none of a polynomials

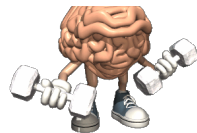
$3x^2 + 6y$ Binomial	$\frac{4x^7}{z}$ None	$9x$ Monomial	$2x^2 - 5x - 1$ Tri
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2) What is the degree of the following polynomial? 12

$$13x^7 - 11x^{12} + 8x^9 - 9x^{11} - 5$$

3) Rewrite the above in descending order

$$-11x^{12} - 9x^{11} + 8x^9 + 13x^7 - 5$$



# Warm Up

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4) Fill in the following

a)  $-4x^6 - 7x^4 + 12$

Variables:  $x$

Coefficients:  $-4$   
 $-7$

Constants:  $12$

Degree:  $6$

b)  $5x^2 + 6y$

Variables:  $x$   
 $y$

Coefficients:  $5$   
 $6$

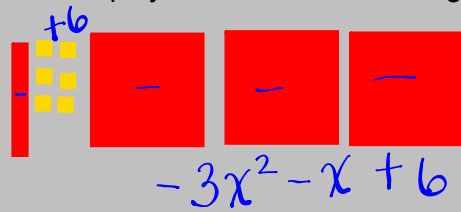
Constants:  $\checkmark$

Degree:  $2$

# Warm Up



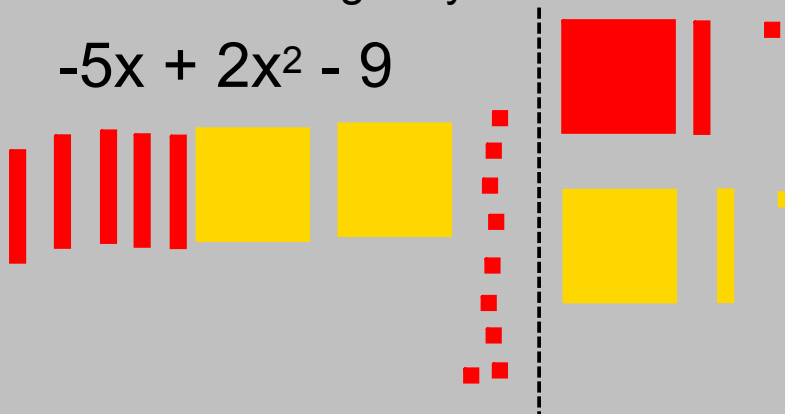
5) Write the polynomial for the following algebra tiles.



Red is (-)  
Yellow (+)

6) Model the following Polynomial

$$-5x + 2x^2 - 9$$



# Class/ Homework



*Check out pages 214 - 216*

8 (hint write all in descending order)

9 (set up a chart)

10

11 abc

$$214 \neq 8 + 9$$

8. a)  $x^2 + 3x - 4$

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

b)  $-3 + 4n - n^2$

$$-n^2 + 4n - 3$$

c)  $4m - 3 + m^2$

$$m^2 + 4m - 3$$

d)  $-4 + r^2 + 3r$

$$r^2 + 3r - 4$$

e)  $-3m^2 + 4m - 3$

$$-3m^2 + 4m - 3$$

f)  $-h^2 - 3 + 4h$

$$-h^2 + 4h - 3$$



## Section 5.2

# Like Terms & Unlike Terms

What do the following pairs of integers all have in common?

$x^2 - x^2 + x^2 = x^2$

*zero pair* -1, 1

$x^2$   ~~$x^2$~~   $x^2$  -2, 2

-100, 100

$-15, 15$

Hint:

$m$   $m$  *zero pair*

$50$  *zero pair*

What do you think happens when a "x" tile and a "-x" tile combine?

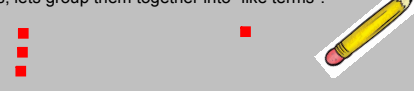



Answer

### TILES

**Like Terms:**  
are algebra tiles with the same shape and size (Don't worry about colour → signs)

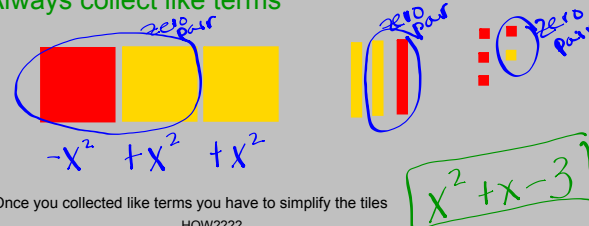
Here is a collection of tiles, lets group them together into "like terms".



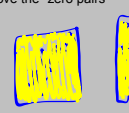


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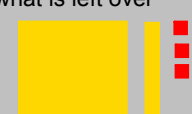
**Always collect like terms**



Once you collected like terms you have to simplify the tiles  
HOW????  
Remove the "zero pairs"



**Copy what is left over**



See see it from the on line textbook  
 $x^2 + x - 3$

## Polynomial Expressions

**Like terms** are  $-3x^2$  and  $4x^2$   
(same letter with the same numerical exponent)

**Unlike Terms** are  $-x^2$  and  $x$  or are  $y^2$  and  $t^2$   
(either different letters and/or different numerical exponent)

**Simplified Form**  
\*fewest algebra tiles possible  
\*contains only one term of each degree and no terms with a zero coefficient

Always simplify any polynomial by grouping like terms.

Simplify the following polynomial

Example:  $-3x^2 + 2x - 7 + 10x + 5 - 4x$

Step 1) Group like terms

Always start with the largest exponent

$$+ 2x^2 - 4x^2 - 3x + 10x - 7 + 5$$

$$- 2x^2 + 7x - 2$$

Ex)  $3+4y+y+7$

Ex)  $4x^2 + 4x^3 + 2x^2$

# Homework



Page 214-215 (leftover questions from last night)

12 (Sketch the tiles and put expression beside it )

13  $adeh$  (Sketch the tiles and put expression beside it )

14  $ac$

Course Outline Grade 9 2010-2011 Second Semester.docx