

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Math 9 HW Section 5.1 Modelling Polynomials:**

1. Indicate the degree, leading Coefficients, and Constant Term for each of the following polynomials:

Polynomial:	Name	Degree	Leading Coefficient	Constant Term:
a) $6x^2 - 8x + 2$	le: <i>Trinomial</i>			
b) $-5x^3 + 7x^2 - x + 13$				
c) $7x^2 - 12x$				
d) $8 - x + 2x^3$				
e)	Binomial	2	7	5

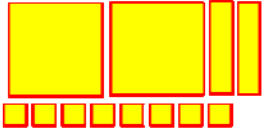
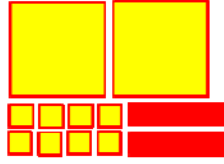

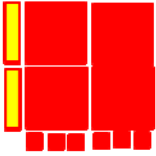
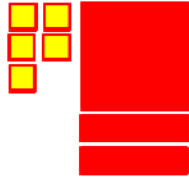



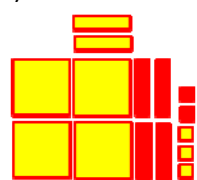
2. Indicate whether if the following are polynomials. If NOT, explain why:

a) $9x^2 - 12x$	b) $3x - 4$	c) $5^x - 4$	d) $\frac{-6x+12}{2}$
e) $\frac{5x^4}{2x}$	f) $3\sqrt{x} + 2$	g) 100	h) $\frac{13+2x}{x-1}$
i) $3x^4 - 2x + 12$	j) $7x^3 - 3x - \sqrt{20}$	k) $9x^4 - \sqrt{15x^2}$	l) $(x^3 - 2x)(x^2 + 5x)$

3. Draw the polynomial with the space given:

a) $6x + 4$	b) $4x^2 - 3x + 1$	c) $2x^2 + 3x$
d) $9x^2 - 1$	e) $x^2 - 6x + 9$	f) $x^2 + 2x + 8$

4. Given each diagram, write the polynomial:

<p>a)</p> 	<p>b)</p> 	<p>c)</p> 
<p>d)</p> 	<p>e)</p> 	<p>f)</p> 
<p>g)</p> 	<p>h)</p> 	<p>i)</p> 

5. Indicate whether if the following statements are true or false:

i) All monomials are polynomials: TRUE / FALSE

ii) All polynomials are binomials: TRUE / FALSE

iii) A binomials is also a monomial: TRUE / FALSE

iv) A trinomial has three terms: TRUE / FALSE

v) An integer is a polynomial: TRUE / FALSE

vi) All polynomials have variables with exponents that are whole numbers: TRUE / FALSE

vii) The variable "x" can not be in the denominator of a polynomial: TRUE / FALSE

6. Simplify the following expression by using the zero property:

$$12x^2 - 8x^2 + 12x - 5 + 5x + 2 + 3x^3$$