

HW SOL 5.1

October 8, 2020 9:31 AM

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>	2	6	2
b) $-5x^3 + 7x^2 - x + 13$	<i>Quadrinomial</i>	3	-5	13
c) $7x^2 - 12x + 0$	<i>Binomial</i>	2	7	0
d) $8 - x + 2x^3$	<i>Trinomial</i>	3	2	8
e) $7x^2 + 5$	Binomial	2	7	5

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

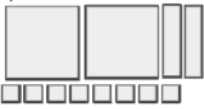








a) $9x^2 - 12x$ Y	b) $3x - 4$ Y	c) $5x - 4$ N <i>x can't be exp.</i>	d) $\frac{-6x+12}{2}$ Y
e) $\frac{5x^4}{2x}$ N	f) $3\sqrt{x} + 2$ N <i>$\sqrt{x} = x^{1/2}$</i>	g) 100 Y	h) $\frac{13+2x}{x-1}$ N
i) $3x^4 - 2x + 12$ Y	j) $7x^3 - 3x - \sqrt{20}$ Y	k) $9x^4 - \sqrt{15x^2}$ N	l) $(x^3 - 2x)(x^2 + 5x)$ Y

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>$2x^2 + 2x + 8$</p>	<p>b)</p>  <p>$2x^2 - 2x + 8$</p>	<p>c)</p>  <p>$2x^2 - 4x + 3$</p>
<p>d)</p>  <p>$-4x^2 + 2x - 6$</p>	<p>e)</p>  <p>$-x^2 - 2x + 5$</p>	<p>f)</p>  <p>$5x^2 - x + 1$</p>
<p>g)</p>  <p>$-x^2 + x - 3$</p>	<p>h)</p>  <p>$4x^2 - 3x + 1$</p>	<p>i)</p>  <p>$4x^2 - 2x + 1$</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 binomial 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:

$$\underline{12x^2} - \underline{8x^2} + \underline{12x} - \underline{5} + \underline{5x} + \underline{2} + \underline{3x^3}$$

$$\underline{3x^3} + \underline{4x^2} + \underline{17x} - \underline{3}$$
