

A polynomial is an expression in which terms are added or subtracted.

e.g.
$$2x^2 + x - 1$$

Polynomials are classified by the number of terms:

 $6x^2$ = one term = monomial

2x + 3y = two terms = binomial

 $4x^2 + 3x - 7 =$ three terms = trinomial

A <u>term</u> is a mathematical expression using numbers and variables to indicate a product

e.g. 3x, $5x^2y$, -7y, x^2 , $5x^3$





The degree of a polynomial is the greatest degree of its terms after it has been simplified

e.g. 3x + 7y degree 1

 $4x^5 + 2x^2$ degree 5

A polynomial is written in standard form when it is written in descending order of its exponents by alphabetical order

Handout: DO TOGETHER AS A CLASS



C. Circle the variable(s) in each of the expressions below .
1.
$$30 + 50 - 6$$

2. $50 + 15$
3. $35^{2} - 40^{2} + 22^{2}$
4. $3^{2} + 00 - 40^{2}$
5. $30^{2} - 300 + 5$
6. $-70 - 52$
7. $14\otimes - 10$
8. $3^{3} + 23^{2} - 33 + 6$
D. Circle the numerical coefficient(s) in each expressions below.
1. $3x$
2. $3x^{2} + 9y^{2}$
3. $-4abc$
4. $20x^{2} + 9y^{2}$
3. $-4abc$
4. $20x^{2} - 30y^{2} + 7$
5. $14xy^{3}$
7. $4a^{2}b + 2ab^{2}$
8. $7x + 9y - 9z$



	1. Name the 2nd degree term in the expression $3x_{\pm}^{3}$ + 5x ² -2x. 5x ²
	2. Write any 4th degree binomial. answers will vary, ex. $x^2y^2 + 7$, $4x^4 + x$
÷	3. How many terms are in the expression $3 - 5xy + 3x^2y^3$? 3
	4. Write out the constant (s) in the expression $3x^2 - 5xy + 2$. 2
	5. Write the following polynomials in standard form:
a ^x	a) $7x^3 - 5x^6 + 2x^2 - 8x^5 + 23$ -5 $x^6 - 8x^5 + 7x^3 + 2x^2 + 23$
	b) $8x^5 + 7x^4 - 6x^5y^3 + 9x^9 - 9x^9 + 8x^5 - 6x^5y^3 + 7x^4$
	6. Write out the 2nd degree term in the polynomial $6x^2 + 3x^2y^2 + 5xy - 7$ 5xy
	7. Write out the 3rd degree term in th polynomial $4x^2y^3 - 7x^3 + 3x^2$. $-7x^3$
	8. Write any 3rd degree trinomial in standard form. answers will vary, ex. $x^3 + 3x - 9$
	9. Which is the numerical coefficient in the term 7x ² y ³ z ⁴ ? 7

	a) It contains <u>three</u> terms, and is therefore called a <u>trinomial</u> .
	b) The second terms contains <u>two</u> factors and they are <u>3 and x</u> .
	c) This polynomial is written in the <u>second</u> degree
	d) The constant(s) in this expression is (are) <u>-5</u>
	e) The numerical coefficient of the 2nd term is3
11.	Write any 5th degree monomial. answers will vary, ex. 5x ³ y ²
12.	Complete the polynomial by writing a 2nd degree term. $8x^7 + 4x^5 \div \frac{2x^2}{2x^2} \div 9x$.
13.	Complete the polynomial by writing a 3rd degree term. $7x^6 + 5x^5 - \frac{7x^3}{-2x^3} + 6x$.

