

Unit 1 Lesson 1 – IDENTIFYING TERMS, FACTORS, COEFFICIENTS and PROPERTIES OF EQUALITY

Algebraic Expression: math statement

Variable: letters that represent values

Term: a number, variable or product of both

Factor: numbers or variables that have been multiplied together

Coefficient: the number in front of variable

Exponent: indicate number of times factor is multiplied by itself

Constants: only a number NO VARIABLE

Like terms: terms with same variable

Order of Operations: PEMDAS (parenthesis, exponent, multiplication and division, addition and subtraction)

EX #1) Identify each term, factor, coefficient and constant of $4x^2 + 3x + 7$.

Expression	$4x^2 + 3x + 7$		
Terms	$4x^2$	$3x$	7
Factors	4 and x^2	3 and x	
Coefficients	4	3	
Constants			7

EX #2) Identify each term, factor, coefficient and constant of $12x^3 + 16x + 4$.

Expression	$12x^3 + 16x + 4$		
Terms	$12x^3$	$16x$	4
Factors	12 and x^3	16 and x	
Coefficients	12	16	
Constants			4

EX #3) Identify each term, factor, coefficient and constant of $2(3 + x) + x(1 - 4x) + 5$.

First you must simplify.

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

$$- 4x^2 + 3x + 11$$

EX #5) Translate the verbal expression into algebraic expression. Then identify the terms, factors, coefficients and constants.

“The product of 4 and the square of a number decreased by 6.”

The phrases separated by the word “and” go together.
 $4x^2 - 6$

EX #4) Identify each term, factor, coefficient and constant of $4(2 - x) + 5x(1 + 3x) - 6$.

First you must simplify.

$$8 - 4x + 5x + 15x^2 - 6$$

$$15x^2 + x + 2$$

EX #6) Translate the verbal expression into algebraic expression. Then identify the terms, factors, coefficients and constants.

“Three times the sum of a number and 5.”

The phrases separated by the word “and” go together.
 $3(x + 5)$

PROPERTIES OF EQUALITY = Rules that allow us to solve for the variable.

EX #7) Which property of equality is missing in the steps to solve the equation $-7x + 22 = 50$?

Equation	Steps
$-7x + 22 = 50$	Original equation
$-7x = 28$	
$x = -4$	Division property of equality

The property that is missing: Subtraction property of equality
22 is being subtracted from both sides of the equation

EX #8) Identify the property of equality that justifies each missing step or equation in the table.

Equation	Steps
$5x = 37$	Original equation
$x = 7.4$	

The property that is missing: Division property of equality
5 is being divided on both sides of the equation