Interpreting Language in Math Expressions

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

Vocabulary	Definition	From Example
Algebraic Expression	A mathematical phrase that contains numbers, operations, and/or variables DOES NOT have an equal sign	See above example Use to create examples for each part of the expression
Variable	A symbol used to represent a quantity that can change	x^2 ; x^1
Term	Part of an expression that is separated by "+" or "-"	$-3x^2$ $4x$ -2
Like Terms	Terms with the same variable and raised to the same exponent	None
Coefficient	A number that is multiplied by a variable Located at the front of the variable	-3 4
Exponent	The number that indicates how many times the base is being multiplied by itself The little number at the top of the base number	$x^{(2)}$ Exponent $x^{(1)}$ Exponent
Base	The number in a power that is used as a factor The big number connected to the exponent	↑ base
Constant	The term that DOES NOT contain a variable Stands Alone Usually placed at the end of an expression	-2
Degree	Highest Degree Exponent Should be listed first in the expression	x^2

Classifying Polynomials

By Degree		By Number of Terms	
Degree	Name	# of Terms	Name
0	Constant	1	Mononomial
1	x^1 : Linear	2	binomial
2	x^2 : Quadratic	3	trinomial
3	x^3 : Cubic	4 or more	polynomial

Name each polynomial by degree **and** number of terms.

1) $-10x$ → variable

Terms: 1 Mononomial
Coeff: -10
Exponent: 1 Degree: 1 Linear

2) $-10r^3 - 8r^2$ Variables

Terms: $-10r^3$, $-8r^2$ (2) Binomial
Coeff: -10, -8
Exponents: 3, 2 Degree: 3 Cubic

3) 7

Terms: 1 Monomial
Constant: 7

4) $3y^2 - 8y + 2$

Terms: $3y^2$, $-8y$, 2 (3) trinomial
coeff: 3, -8
Constant: 2
Exponents: 2, 1 Degree: 2 Quadratic

5) $-3n^3 + n^2 - 10n + 9$ Variables

Terms: $-3n^3$, $1n^2$, $-10n^1$, 9 (4) poly
Coeff: -3, 1, -10
Constant: 9
Exponent: 3, 2, 1 Degree: 3 Cubic

6) $7x^2 - 9x$

Terms: 7, -9 (2) binomial
Coeff: 7, -9
Exponent: 2, 1 Degree: 2 Quadratic

7) $-4b$

Terms: -4b (1) monomial
Coeff: -4
Exponents: 1 Degree: 1 Linear

8) $-9 + 7n^3 - n^2$

STANDARD FORM: $7n^3 - 1n^2 - 9$
Terms: $7n^3$, $-1n^2$, -9 (3) trinomial
coeff: 7, -1
Constants: -9
Exponents: 3, 2 Degree: 3 Cubic