

# POLYNOMIALS

many

POLYNOMIAL:

more than one terms.

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MUST STILL MEET THESE CONDITIONS!

1. No Neg. Exps.
2. No Fractions Exps.

## NAMING POLYNOMIALS

A polynomial can be classified according to how many "terms" it has.

Category	Sample	Definition
monomial	$\frac{5}{2}x^2y^3$	One term
binomial	$4x^2 - 9x$	2 terms
trinomial	$2x^2 + 3x + 1$	3 terms
Polynomial	$3a^4b + 7bc^2 + 6cd - 8$	4 or more terms

## Simplifying Polynomials

1. Distribute
2. Apply Exp. Rules (Add)
3. Combine Like Terms

EX # 1: SIMPLIFY

$$4(-4x^2 - 3xy + 5y^2)$$

$$\underline{4}(-4x^2) + \underline{4}(-3xy) + \underline{4}(5y^2)$$

$$\underline{-16x^2 - 12xy + 20y^2}$$

EX # 2: SIMPLIFY

$$3xy^2(5x^2y - 6xy^3)$$

$$3x^1y^2(5x^2y) + (3x^1y^2)(-6xy^3)$$

$$15x^3y^3 - 18x^2y^5$$