

6.1 Polynomials

Study 6.1 # 1-15, 19, 23, 27,
31, 33, 39, 59, 65

Class Notes: Prof. G. Battaly, Westchester Community College, NY

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6.1 Polynomials

Monomial: product of a constant and one or more variables raised to whole number powers

$$3 \quad 2a^2 \quad y^2 \quad 5b^2c \quad 7z \quad 2x^2y$$

Polynomial: monomial or sum of monomials

$$2x^2y + 3x - 2xy + 9$$

Degree:

Exponent: for term with one variable above:
0, 2, 2, 3, 1, 3

Sum of Exponents: for term with more than one variable

Degree of Polynomial:

Highest degree of any term 3

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6.1 Polynomials

Term: product of a constant and one or more variables

3

 $2a^{1/3}$ y^2 $b^{1/2}$ $7z$ $2x^2y$

Like Terms: have same variables to same exponents

$4x^2 - 7x + 4x^2 - 9x$	$3x - x^{1/2}$
Polynomial?	
How many terms?	
Which are "like terms"?	
Simplify	

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6.1 Polynomials

Simplify $-5x^3 - 8x^2 + 4 - 4x^3 + x - 9$

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6.1 Polynomials

Simplify

$$(x^3y - 5x^2y^2 + 2xy^3) + (5x^2y^2 - 4xy^3 + 7y^4)$$

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6.1 Polynomials

Simplify

$$(a^3b - 5a^2b^2 + ab^3) - (5a^2b^2 - 7ab^3 + b^3)$$

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6.1 Polynomials

Simplify

$$(6x^4y + x^3y^2 - 3x^2y^3) - (4x^3y^2 - 3x^2y^3 - 5xy^4)$$

$$\begin{array}{r} 6x^4y + x^3y^2 - 3x^2y^3 \\ - 4x^3y^2 + 3x^2y^3 + 5xy^4 \\ \hline \end{array}$$

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