






# 9.1 Adding and Subtracting Polynomials

Monomial	1	$x, 3, 2y$
Binomial	2	$x+4, 2x+y$
Trinomial	3	$x^2+6x+9$ $2a+3b+4$
Polynomial	4	$4x^3-2x^2+x-5$
Constant	number	$2, 5, -4$

Degree	$r=1$ $s=1$	$x^0=1$
Constant	Example $5x^0$	0
Monomial	$x^1$	1
	$x^2$	2
	$x^3$	3
	Add exponents or variables $x^2y^3$	5
	$4ab^4$	5
	$7r^4s^2$	6
Binomial	$x^2 + 7$	2
Largest degree of any term	$\textcircled{2}$ 0	
	$x^4 + y^2$	4
	$\textcircled{4}$ 2	
	$x^2y + xy$	3
	$\textcircled{3}$ 2	
Trinomial	$x^2 + 5x + 6$	2
	$\textcircled{2}$ 1 0	
Polynomial	$x^5 + 3x^4 - 2x^3 + 4x^2 - x$	5
	$\textcircled{5}$ 4 3 2 1	
	$x^4y^2 + x^3y + 4xy^2 + 5xy - 3$	6
	$\textcircled{6}$ 4 3 2 0	

Degree	Name	Classify by degree
0	Constant	
1	Linear	
2	Quadratic	
3	Cubic	
4	Quartic	

Classify by number of terms

Monomial

Binomial

Trinomial

Polynomial

Classify by degree

Constant

Linear

Quadratic

Cubic

Quartic

$$x^2 + 7x + 8$$

Quadratic Trinomial

$$x + 4$$

Linear Binomial

$$x^3 + 5x^2 - 2x + 7$$

Cubic Polynomial

Like Terms  
Same variable raised to the  
same exponent

$$2x + 3x$$

$$5x$$

Add  
coefficients

$$(4a + 3b + 7) + (2a - b - 5)$$

$$6a + 2b + 2$$

$$(8m + 3n - 2) + (3m - 9n - 6)$$

$$11m - 6n - 8$$

$$\begin{array}{r} 8m + 3n - 2 \\ + 3m - 9n - 6 \\ \hline 11m - 6n - 8 \end{array}$$

$$(x^2 + 5x - 1) + (3x^2 - 2x - 8)$$

$$4x^2 + 3x - 9$$

$$x^2 + 5x - 1 + 3x^2 - 2x - 8$$

$$(8x + 6y + 5) - (2x + 3y + 1)$$

$$6x + 3y + 4$$

$$(4a - 3b - 6) - (5a - 2b - 1)$$

$$-a - b - 5$$

$$-3b + 2b$$

$$-6 + 1$$

$$-5$$

$$(4a - 3b - 6) - 1(5a - 2b - 1)$$

$$4a - 3b - 6 - 5a + 2b + 1$$

$$-a - b - 5$$

$$(x^2 + 4x - 5) - (4x^2 - 3x - 1)$$

$$-3x^2 + 7x - 4$$

$$x^2 + 4x - 5 - 4x^2 + 3x + 1$$

Standard Form

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