Name_____ Date_____ Per____
Polynomial Operations

Vocabulary

Standard Form:	Degree of a Polynomial:	Term:
Coefficient:	Factors:	Constant:

Adding Polynomials
To add polynomials, _____.

$(19x^2 + 12x + 12) + (7x^2 + 10x + 13)$	Identify all the terms	
	Identify any constants	
	Classify by the number of terms	
	Determine whether the expression is a quadratic expression	
The fence surrounds a park in the shape of a pentagon. The side lengths of the park in feet are given by the expressions $2x^2, 3x + 1, 3x + 2, 4x \text{ and } 5x - 3$. Find an expression for the perimeter of the park.	Identify all the terms	
	Identify any constants	
	Classify by the number of terms	
	Determine whether the expression is a quadratic expression	

Subtracting Polynomials
To subtract polynomials, _____.

$(17x^2 + 7x - 14) - (-6x^3 - 5x - 18)$	Identify all the terms	
	Identify any constants	
	Classify by the number of terms	
	Determine whether the expression is a quadratic expression	

For a rectangle with length of $3x + 4$ and perimeter of $10x + 10$, what is the width of the rectangle?	Identify all the terms	
	Identify any constants	
	Classify by the number of terms	
	Determine whether the expression is a quadratic expression	

Multiplying Polynomials

To multiply polynomials, _____.

$4x(3x^2 - 5x + 10)$	$(x + 5)(x^2 - 6x + 3)$

Practice

$6(x - 1) - x(3 - 2x) + 12$	Identify all the terms	
	Identify any constants	
	Classify by the number of terms	
	Determine whether the expression is a quadratic expression	

Translate the verbal expression "take triple the difference of 12 and the square of x, then increase the results by the sum of 3 and x" into an algebraic expression. Identify the terms, coefficients, and constants of the given expression. Is the expression quadratic?	Shanna wants to decorate the triangular deck behind her house. The base of the triangle is 10 meters shorter than the altitude. What are the terms and coefficients of the quadratic expression that represents the area of the deck to be decorated?