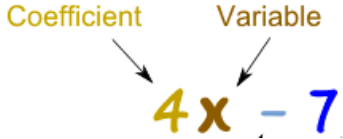
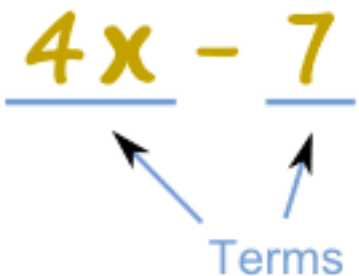
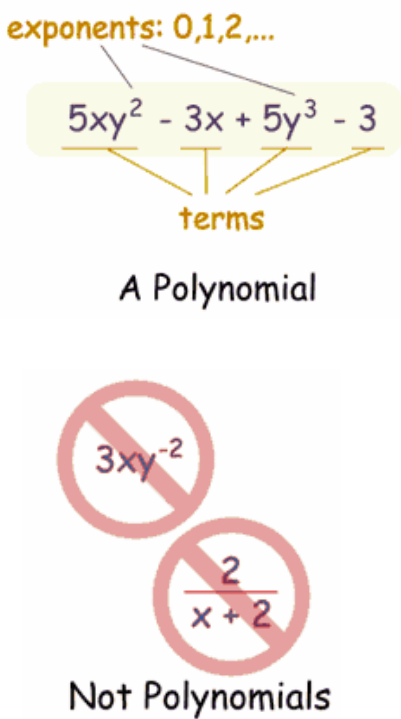


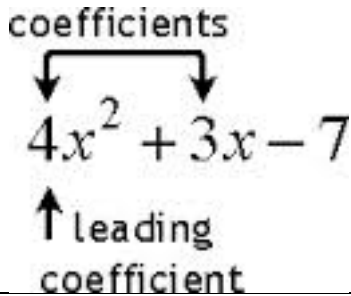
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### Quadratics 1 Vocabulary

Word	Definition	Example
Coefficient	A number used to multiply a variable.	
Terms	<p>In Algebra a term is either a single number or variable, or numbers and variables multiplied together.</p> <p>Terms are separated by + or - signs</p>	
Polynomial	<p>An expression that can have constants, variables and exponents, that can be combined using addition, subtraction, multiplication and division, but:</p> <ul style="list-style-type: none"> <li>• no division by a variable.</li> <li>• a variable's exponents can only be 0,1,2,3,... etc.</li> <li>• it can't have an infinite number of terms.</li> </ul>	

Word	Definition	Example
Monomial	A polynomial with just one term.	$3xy^2$ Monomial (1 term)
Binomial	A polynomial with just two terms.	$5x - 1$ Binomial (2 terms)
Trinomial	A polynomial with just three terms.	$3x + 5y^2 - 3$ Trinomial (3 terms)
Degree of a monomial	Add the exponents on all variables	$3xy^2$ Monomial (1 term) Degree = 3
Degree of a polynomial	<p>For a polynomial with only one variable term, the degree is the exponent of that variable</p> <p>For a polynomial with more than one variable, add up the exponents for each term, and use the highest such value</p>	<p><math>4x^3 + 2x^2 - 7</math> <i>this makes it Degree 3</i></p> <p>OR</p> <p> <math>x^5y^3z + 2xy^3 + 4x^2yz^2</math>  <math>\downarrow \quad \downarrow \quad \downarrow</math>  <math>5+3+1 \quad 1+3 \quad 2+1+2</math>  <math>= 9 \quad = 4 \quad = 5</math> </p>
Standard form of a polynomial	<p>A general term meaning "written down in the way most commonly accepted"</p> <p>For a polynomial it means that all terms are written in order from highest to lowest degree</p>	<p>Example: Put this in Standard Form:</p> $3x^2 - 7 + 4x^3 + x^6$ <p>The highest degree is 6, so that goes first, then 3, 2 and then the constant last:</p> $x^6 + 4x^3 + 3x^2 - 7$

Word	Definition	Example																					
Leading Coefficient	Coefficient of the term with the HIGHEST degree																						
Quadratic Expression	<p>The name <b>Quadratic</b> comes from "quad" meaning square, because the variable gets squared (like <math>x^2</math>).</p> <p>It is also called an "Expression of degree 2" (because of the "2" on the <math>x</math>)</p> <table border="1" data-bbox="354 850 857 1165"> <thead> <tr> <th>Degree</th> <th>Name</th> <th>Example</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Constant</td> <td>7</td> </tr> <tr> <td>1</td> <td><a href="#">Linear</a></td> <td><math>x+3</math></td> </tr> <tr> <td>2</td> <td><a href="#">Quadratic</a></td> <td><math>x^2-x+2</math></td> </tr> <tr> <td>3</td> <td>Cubic</td> <td><math>x^3-x^2+5</math></td> </tr> <tr> <td>4</td> <td>Quartic</td> <td><math>6x^4-x^3+x-2</math></td> </tr> <tr> <td>5</td> <td>Quintic</td> <td><math>x^5-3x^3+x^2+8</math></td> </tr> </tbody> </table>	Degree	Name	Example	0	Constant	7	1	<a href="#">Linear</a>	$x+3$	2	<a href="#">Quadratic</a>	$x^2-x+2$	3	Cubic	$x^3-x^2+5$	4	Quartic	$6x^4-x^3+x-2$	5	Quintic	$x^5-3x^3+x^2+8$	$ax^2 + bx + c$ <p>a, b, and c are known values (a can't be 0)  "x" is the variable or unknown</p>
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FOIL	<p>A handy way to remember how to multiply two binomials.</p> <p>It is the sum of:</p> <p>multiplying the <b>First</b> terms,  multiplying the <b>Outside</b> terms,  multiplying the <b>Inside</b> terms, and  multiplying the <b>Last</b> terms</p> <p>Example: <math>(a+b)(c+d) = ac + ad + bc + bd</math></p>	