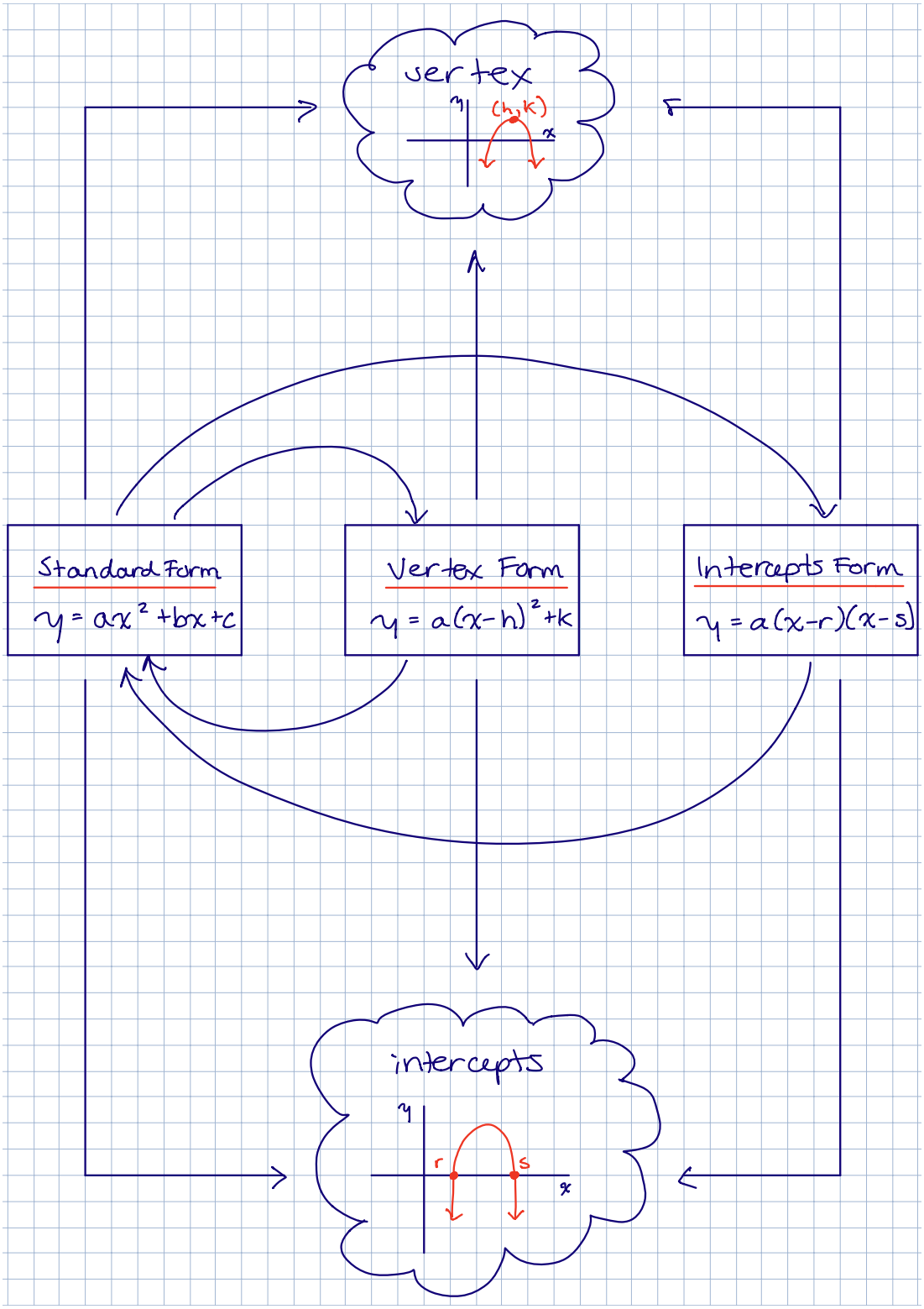
Getting Ready for Quadratic Expressions

Quadratic Relations Concept Map



Classifying Polynomials

You can classify a polynomial by the number of terms.

Terms in a polynomial are separated by _____ .

A polynomial with a single term is a _____ .

A polynomial with two terms is a _____ .

A polynomial with three terms is a _____ .

Example 1

Classify each polynomial by its number of terms.

Polynomial	# of Terms	Classification
$2x^2 + 6$		
$5x$		
$5x^2 + 6x - 7$		
$3xy + 5$		
19		

You can also classify a polynomial by its degree.

The degree of a single term is the _____ on it's variables.

Example 2

Determine the degree of each term.

Monomial	Degree of term
$5x^2$	
$3x^2y^3$	
$8y$	
$7xy^3$	
19	

The degree of an entire polynomial is the _____ _____ of any of it's terms.

Example 3

State the degree of each polynomial.

Polynomial	Degree of polynomial
$2abc$	
$7x^3 + x$	
$3x^2 + 5x - 7$	
$7k^2m + 15k^3m^2 - 6km^2$	

Operations with Polynomials

To add or subtract polynomials, _____ the value outside the

brackets. Then collect _____ _____ .

Example 3

Simplify.

a) $\left(2x^2 + 3x - 5\right) + \left(7x^2 - 6x - 2\right)$

b) $\left(4a^2 + 5ab - 9b^2\right) - \left(7a^2 - 6ab + 2b^2\right)$

The Product of a Monomial and a Polynomial

The _____ _____ allows us to expand an algebraic expression.

When _____, multiply the term outside the brackets by each term inside the brackets.

Example 4

Expand using the distributive property.

a) $2(x+3)$

b) $2x(x+1)$

c) $-a(3a+5)$

Factors

_____ of a number are numbers that divide evenly into something.

For example, the factors of _____ are _____ , _____ , _____ , and _____ .

To find the _____ _____ _____ of a

pair of numbers, express each number as a product of it's prime factors.

Example 5

Use prime factors to find the greatest common factor of each pair of numbers.

a) 12 and 18

The GCF is _____ .

b) 36 and 60

The GCF is _____ .

Opportunity to Learn

Use these IXL pages to master each of the concepts we discussed above. Earn a "Smart Score" of 80% or better. To follow links, go to our class website and view this page as PDF file.

O.1 Polynomial vocabulary O.4 Add and Subtract Polynomials

O.6 Multiply a Polynomial by a Monomial

A.2 Prime Factorization A.3 Greatest Common Factor