

**Prerequisite Trees on all topics from Prealgebra to College Algebra linked to KhanAcademy videos.**

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To access the video, Control+Click on the title in the right column.

**PRT on Whole Numbers**

<b>Obstacles</b>	<b>KhanAcademy.org videos</b>
I do not know the Place value system.	<a href="#">Place Value 3</a>
I do not know how to add whole numbers	<a href="#">Addition 3</a>
I do not know how to subtract whole numbers	<a href="#">Subtraction 3: Introduction to Borrowing or Regrouping</a> <a href="#">Subtracting Whole Numbers</a> <a href="#">Why borrowing works</a>
I do not know how to multiply whole numbers	<a href="#">Basic Multiplication</a> <a href="#">Multiplication 2: The Multiplication Tables</a> <a href="#">Multiplication 3: 10,11,12 times tables</a> <a href="#">Multiplying Whole Numbers and Applications 4</a>
I do not know how to divide whole numbers	<a href="#">Division 1</a> <a href="#">Division 2</a> <a href="#">Level 4 division</a>
I do not know how to round whole numbers	<a href="#">Rounding Whole Numbers 3</a>
I do not know how to estimate whole numbers.	<a href="#">Rounding Whole Numbers 3</a>

### PRT on Fractions

Obstacles	KhanAcademy.org videos
I do not know what a fraction is.	<a href="#">Numerator and Denominator of a Fraction</a>
I do not know what an improper fraction is and mixed number is.	<a href="#">Mixed numbers and improper fractions</a>
I do not know how to compare two fractions.	<a href="#">Comparing Fractions</a> <a href="#">Comparing Fractions 2</a>
I do not know how to reduce a fraction.	<a href="#">Fractions in lowest terms</a>
I do not know how to multiply fractions.	<a href="#">Multiplying Fractions and Mixed Numbers</a>
I do not know how to divide fractions.	<a href="#">Dividing Mixed Numbers and Fractions</a>
I do not know how to add and subtract fractions with the same denominators.	<a href="#">Adding Fractions with Like Denominators</a> <a href="#">Subtracting Fractions</a>
I do not know how to add and subtract fractions with different denominators.	<a href="#">Adding Fractions with Unlike Denominators</a> <a href="#">Adding Mixed Numbers with Unlike Denominators</a> <a href="#">Adding and subtracting fractions</a>
I do not know how to solve a fractional equation. (Better done after equations)	<a href="#">Algebra: Linear Equations 4</a>
I do not know ratio and proportion are.	<a href="#">Understanding Proportions</a> <a href="#">Find an Unknown in a Proportion 2</a> <a href="#">Ratio and Proportion</a>

### PRT on Decimals

Obstacles	KhanAcademy.org videos
I do not know the Place value system for decimals.	<a href="#">Decimal Place Value 2</a>
I do not know how to change decimals to fractions and arbitrary fractions to decimals	<a href="#">Decimals and Fractions</a>

	<a href="#">Converting Fractions to Decimals Example</a> <a href="#">Converting fractions to decimals</a>
I do not know how to add and subtract decimals	<a href="#">Adding Decimals</a> <a href="#">Subtracting Decimals</a>
I do not know how to multiply decimals	<a href="#">Multiplying Decimals 3</a>
I do not know how to divide decimals	<a href="#">Dividing Decimals</a>
I do not know how to round decimals.	<a href="#">Rounding Decimals</a>
I do not know how to change a repeating decimal into a fraction (This is an advanced concept.)	<a href="#">Converting Repeating Decimals to Fractions 2</a>

### PRT on Basic Geometry

Obstacles	KhanAcademy.org videos
I do not know what perimeter and area are. I do not know the area and perimeter of a rectangle or square are. I do not know how to find the area and perimeter of a triangle.	<a href="#">perimeter-and-area-basics</a> <a href="#">area-and-perimeter</a>
I do not know how to find the area and perimeter of a polygon.	<a href="#">perimeter-of-a-polygon</a> <a href="#">perimeter-and-area-of-a-non-standard-polygon</a>
I do not know what the circumference of a circle is. I do not know how Pi ( $\pi$ ) is related to the circle. I do not know the various parts of the circle I do not know how to find the area of a circle.	<a href="#">circles--radius--diameter-and-circumference</a>  <a href="#">parts-of-a-circle</a>  <a href="#">area-of-a-circle</a>

### PRT on Introducing Signed Numbers

Obstacles	KhanAcademy.org videos
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I do not know what the signed number is.	<a href="#">Negative Numbers Introduction</a>
I do not know the practical interpretation of a signed number.	<a href="#">Ordering Negative Numbers</a>
I do not know the number line.	<a href="#">Absolute Value and Number Lines</a>
I do not know the absolute value is.	<a href="#">Absolute Value and Number Lines</a> <a href="#">Absolute Value of Integers</a>
I do not know what the opposite of a number is.  (The video includes this concept)	<a href="#">Opposite of a Polynomial</a>
I do not know the geometric interpretation of the opposite of a number.	

### PRT on Adding Signed Numbers

Obstacles	KhanAcademy.org videos
I do not know how to add signed numbers on a number line.	<a href="#">Adding Negative Numbers</a>
I do not know how to add more than two signed numbers of the same sign.	<a href="#">Adding integers with different signs</a>
I do not know how to add arbitrary group of signed numbers.	
I do not know the real world interpretation of signed numbers.	<a href="#">Adding/Subtracting negative numbers</a>

### PRT on Subtracting Signed Numbers

Obstacles	KhanAcademy.org videos
I do not know how to subtract two signed numbers on a number line.	<a href="#">Adding/Subtracting negative numbers</a>
I do not know how to subtract more than two signed numbers of the same sign.	
I do not know how to subtract arbitrary group of signed numbers.	
I do not know the real world interpretation of subtraction signed numbers.	

### PRT on Multiplying Signed Numbers

Obstacles	KhanAcademy.org videos
I do not know how to multiply two signed numbers.	<a href="#">Multiplying and dividing negative numbers</a>

I do not know how to multiply arbitrary group of signed numbers.	
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### PRT on Dividing Signed Numbers

<b>Obstacles</b>	KhanAcademy.org videos
I do not know how to divide two signed numbers.	<a href="#">Multiplying and dividing negative numbers</a>

### PRT on Commutative, Associative and Distributive Laws, Order of Operations

<b>Obstacles</b>	KhanAcademy.org videos
I do not know what the commutative law is.	<a href="#">Commutative Law of Addition</a> <a href="#">Commutative Law of Multiplication</a>
I do not know what the associative law is.	<a href="#">Associative Law of Addition</a> <a href="#">Associative Law of Multiplication</a>
I do not know the difference between the commutative and associative law.	<a href="#">Commutative Property for Addition</a>
I do not know what the distributive law is. (This concept is useful in factoring and multiplication in algebra.)	<a href="#">The Distributive Property</a> <a href="#">The Distributive Property 2</a> <a href="#">Distributive Property Example 1</a>
I do not know the order of operations	<a href="#">Introduction to Order of Operations</a> <a href="#">Order of Operations 1</a> <a href="#">Order of Operations Example</a>

### PRT on Algebraic Expressions

<b>Obstacles</b>	KhanAcademy.org videos
I do not know what coefficients are like terms are	<a href="#">Terms coefficients and exponents in a polynomial</a>
I do not know how to evaluate a polynomial for a given value of the variable. (This concept is useful in plotting and understanding functions)	<a href="#">Evaluating a polynomial at a given value</a>

I do not know like terms are	<a href="#">Adding Polynomials</a> <a href="#">Subtracting Polynomials</a>
I do not know how to add like terms	<a href="#">Addition and Subtraction of Polynomials</a>
I do not know how to remove parenthesis preceded by a whole number (use the distributive law)	<a href="#">Distributive Property Example 1</a>
I do not know how to remove parenthesis preceded by a plus sign	
I do not know how to remove parenthesis preceded by a minus sign	

### PRT on Solving Linear Equations

Obstacles	KhanAcademy.org videos
I do not know the meaning of solution of equations.	<a href="#">Simple Equations</a> <a href="#">Solving One-Step Equations</a>
I do not know where to start.	<a href="#">Solving for a Variable 2</a>
I do not know how to remove parentheses. I do not know how to combine like terms.	<a href="#">The Distributive Property 2</a>
I do not know the meaning of transpose.	<a href="#">One Step Equations</a>
I do not know how to isolate the unknown.	<a href="#">Two-Step Equations</a>
I do not know how to solve word problems in solving equations.	<a href="#">Multi-Step Equations</a>

### PRT on Percent

Obstacles	KhanAcademy.org videos
I do not know what a percent is	<a href="#">Describing the Meaning of Percent 2</a>
I do not know how to convert percent to decimal and vice versa	<a href="#">Representing a number as a decimal, percent, and fraction 2</a>
I do not know how to find a percent of a number.	<a href="#">Identifying Percent Amount and Base</a>
I do not know how to find a number if it's percent is given.	<a href="#">Solving Percent Problems</a>
I do not know how to find what percent is one number of another.	<a href="#">Solving Percent Problems 2</a>
I do not know how to solve word problems that	<a href="#">Solving Percent Problems 3</a>

include percent	
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### PRT on Ratio and Proportion

Obstacles	KhanAcademy.org videos
I do not know what a ratio is	<a href="#">Introduction to Ratios (new HD version)</a>
I do not know what a proportion is	<a href="#">Understanding Proportions</a> <a href="#">Simplifying Rates and Ratios</a>
I do not know how to solve proportion	<a href="#">Ratio and Proportion</a>
I do not know how to solve word problems that include ratio and proportions	<a href="#">Find an Unknown in a Proportion 2</a>

### PRT on Exponents

Obstacles	KhanAcademy.org videos
I do not know what the positive integer exponent is.	<a href="#">Understanding Exponents</a> <a href="#">Understanding Exponents 2</a>
I do not know how to multiply products of powers of the same base.	<a href="#">Exponent Rules Part 1</a> <a href="#">Exponent Properties Involving Products</a>
I do not know how to raise the power to power.	<a href="#">Exponent Rules 1</a> <a href="#">Exponent Properties 3</a>
I do not know how to raise a product to a power.	<a href="#">Exponent Properties 4</a>
I do not know how to raise a fraction to a power.	<a href="#">Exponent Properties 5</a>
I do not know how to divide powers of the same base.	<a href="#">Exponent Properties Involving Quotients</a>
I do not know what the negative exponents are.	<a href="#">Level 2 Exponents</a>
I do not know the meaning of zero exponent.	<a href="#">Negative Exponent Intuition</a> <a href="#">Level 3 exponents</a>
I do not know scientific notation	<a href="#">Scientific notation 1</a> <a href="#">Scientific notation 2</a>

**PRT on Adding and Subtracting Polynomials**

<b>Obstacles</b>	<b>KhanAcademy.org videos</b>
I do not know what like terms are.	<a href="#">Simply a polynomial</a>
I do not know how to add like terms.	<a href="#">Adding and Subtracting Polynomials 1</a> <a href="#">Adding and Subtracting Polynomials 2</a>
I do not know how to remove parentheses.	<a href="#">Adding and Subtracting Polynomials 3</a> <a href="#">Addition and Subtraction of Polynomials</a>

**PRT on Multiplying Polynomials**

<b>Obstacles</b>	<b>KhanAcademy.org videos</b>
I do not know how to multiply monomials by monomials.	<a href="#">Multiplying Monomials</a>
I do not know how to multiply a polynomial by a monomial.	<a href="#">Level 1 multiplying expressions</a>
I do not know how to multiply a polynomial by a polynomial.	<a href="#">Multiplying Monomials by Polynomials</a> <a href="#">Multiplying Binomials</a> <a href="#">Square a Binomial</a> <a href="#">Special Products of Binomials</a>
I do not know how multiplication of polynomials occurs in word problems	<a href="#">Multiplying Polynomials 2</a> <a href="#">Multiplying Polynomials 3</a>



**PRT on “Short Division”**

Obstacles	KhanAcademy.org videos
I do not know what a monomial is.	<a href="#">Multiplying and Dividing Monomials 1</a>
I do not know how to divide a monomial by a monomial.	<a href="#">Multiplying and Dividing Monomials 2</a> <a href="#">Multiplying and Dividing Monomials 3</a>
I do not know how to separate a fraction	<a href="#">Polynomial divided by monomial</a>

**PRT on “Long Division of Polynomials”**

Obstacles	KhanAcademy.org videos
I do not know what division of polynomials is I do not know how eliminate leading terms . I do not know how to subtract in a vertical format I do not understand the significance of a remainder. I do not understand the significance of a remainder as a fraction.	<a href="#">Polynomial Division</a> <a href="#">Dividing polynomials 1</a> <a href="#">Algebraic Long Division</a> <a href="#">Dividing polynomials with remainders</a>

**PRT on Factoring**

Obstacles	KhanAcademy.org videos
I do not know what a factoring is.	<a href="#">Prime Factorization</a> <a href="#">Factor polynomials using the GCF</a>
I do not know how to remove a common factor	<a href="#">Factoring and the Distributive Property 2</a> <a href="#">Factoring and the Distributive Property 3</a>
I do not know how to find the greatest common factor.	<a href="#">Factoring Trinomials by Grouping 6</a>
I do not know how to factor trinomials into binomials.	<a href="#">Factoring trinomials with a leading 1 coefficient</a> <a href="#">Factoring Quadratic Expressions</a> <a href="#">U09_L1_T2_we3 Factoring Trinomials by Grouping 3</a>
I do not know the difference of squares	<a href="#">Factoring difference of squares</a>

I do not know what a perfect square is	<a href="#">U09 L2 T1 we1 Factoring Special Products 1</a>
I do not know how to do a factoring problem in multiple steps.	<a href="#">Factoring trinomials with a common factor</a> <a href="#">Factoring trinomials with a non-1 leading coefficient by grouping</a>
I do not know when a polynomial is completely factored.	<a href="#">Factor by Grouping and Factoring Completely</a>

### PRT on Solving Quadratic Equations by Factoring

Obstacles	KhanAcademy.org videos
I do not know what a quadratic equation is.	<a href="#">Introduction to the quadratic equation</a>
I do not know how to factor/I have difficulty factoring.	<a href="#">Factoring Quadratic Expressions</a>
I do not know how to solve linear equations.	<a href="#">Algebra: Linear Equations 2</a> <a href="#">Algebra: Linear Equations 3</a> <a href="#">Algebra: Linear Equations 4</a>
I do not know how to make the coefficient positive.	
I do not know how to put a quadratic equation in standard form	<a href="#">Quadratic Equations in Standard Form</a>
I do not know how to solve a quadratic equation by factoring	<a href="#">Solving Quadratic Equations by Factoring.avi</a> <a href="#">Solving Quadratic Equations by Factoring 2.avi</a> <a href="#">Factoring Special Products</a>
I do not know how to solve word problems involving quadratic equations.	<a href="#">Applications Problem Factoring Quadratics</a>

### PRT on Radicals (Elementary Algebra)

Obstacles	KhanAcademy.org videos
I do not know how to take a square root of a product.	<a href="#">Understanding Square Roots</a>

	<a href="#">Approximating Square Roots</a> <a href="#">Square Roots and Real Numbers</a>
I do not know how to simplify the square root of a monomial.	<a href="#">Simplifying Square Roots</a>
I do not know how to add like radicals.	<a href="#">Adding and Simplifying Radicals</a>
I do not know how to simply add radical expressions.	
I do not know how to multiply radicals.	<a href="#">Multiply and Simplify a Radical Expression 1</a> <a href="#">Multiply and Simplify a Radical Expression 2</a>
I do not know how to rationalize when the denominator is a square root of a monomial.	<a href="#">How to Rationalize a Denominator</a>

### PRT on Pythagorean Theorem

Obstacles	KhanAcademy.org videos
I do not know what the Pythagorean Theorem is	<a href="#">Introduction to the Pythagorean Theorem</a>
I do not know how to find the third side given two sides of a right triangle.	<a href="#">The Pythagorean Theorem</a>
I do not know why the Pythagorean Theorem is true (Optional)	<a href="#">Pythagorean Theorem Proof Using Similarity</a>

### PRT on Lines

Obstacles	KhanAcademy.org videos
I do not know how to plot a point	<a href="#">Plot ordered pairs</a>
I do not know how to plot a linear equation.	<a href="#">Graphs of Linear Equations</a>
I do not know the relevance of a line to the real life.	<a href="#">Exploring linear relationships</a> <a href="#">Application problem with graph</a> <a href="#">Interpreting Linear Graphs</a>
I do not know what the intercepts of a line are.	<a href="#">X and Y intercepts</a> <a href="#">X and Y intercepts 2</a>

Given a graph of a line, I do not know how to find its intercepts.	<a href="#"><u>Graphing Using Intercepts</u></a> <a href="#"><u>Graphing using X and Y intercepts</u></a>
I do not know what a slope of a line is.	<a href="#"><u>Slope of a line</u></a> <a href="#"><u>Algebra: Slope and Y-intercept intuition</u></a>
Given a graph of a line, I do not know how to find its slope.	<a href="#"><u>Graphical Slope of a Line</u></a> <a href="#"><u>Slope of a Line 2</u></a> <a href="#"><u>Slope of a Line 3</u></a>
I do not know the significance of the slope of a line.	<a href="#"><u>Graphical Slope of a Line</u></a>
I do not know how to find the point –slope form of a line	<a href="#"><u>Linear Equations in Point Slope Form</u></a>
I do not know how to find the slope-intercept form of a line.	<a href="#"><u>Linear Equations in Slope Intercept Form</u></a>
I do not know how to find the slope of a line from its equation.	<a href="#"><u>Graphs Using Slope-Intercept Form</u></a>
I do not know what the standard form is.	<a href="#"><u>Linear Equations in Standard Form</u></a> <a href="#"><u>Point-slope and standard form</u></a>
Given a graph, I do not know how to find its equation.	<a href="#"><u>Algebra: Equation of a line</u></a>
I do not know the relationships of slopes of parallel lines.	<a href="#"><u>Parallel Lines</u></a> <a href="#"><u>Parallel Lines 2</u></a> <a href="#"><u>Parallel lines 3</u></a>
I do not know the relationships of slopes of perpendicular lines.	<a href="#"><u>Perpendicular Lines Perpendicular lines 2</u></a>
I do not know how to find an equation of a line that is parallel or perpendicular to a given line.	<a href="#"><u>Equations of Parallel and Perpendicular Lines</u></a> <a href="#"><u>Word Problem Solving 4</u></a>

**PRT on Systems of (linear) Equations of Two Unknowns**

Obstacles	KhanAcademy.org videos
<p>I do not know the meaning of systems of equations</p> <p>I do not know the meaning of solutions of a systems of equations.</p>	<p><a href="#">systems of equations</a></p> <p><a href="#">Testing a solution for a system of equations</a></p>
<p>I do not know the relevance of a system of equations to the real life.</p>	<p><a href="#">Officer on Horseback</a></p> <p><a href="#">Patterns and Equations</a></p>
<p>I do not know how to solve graphically a system of equations.</p>	<p><a href="#">Solving systems by graphing</a></p> <p><a href="#">Graphings Systems of Equations</a></p>
<p>I do not know when a system of equations has a single solution or no solutions.</p> <p>I do not the meaning of dependent and independent systems.</p> <p>I do not the meaning of consistent and inconsistent systems of equations</p>	<p><a href="#">Solving systems by graphing 2</a></p> <p><a href="#">Independent and Dependent Systems</a></p> <p><a href="#">Consistent and Inconsistent Systems</a></p>
<p>I do not know when a system of equations has infinitely many solutions.</p>	<p><a href="#">Solving systems by graphing 3</a></p> <p><a href="#">Addition Elimination Method 3</a></p>
<p>I do not know how to solve a system of equations by substitution.</p>	<p><a href="#">Solving systems by substitution 1</a></p> <p><a href="#">Solving systems by substitution 2</a></p> <p><a href="#">Solving systems by substitution 3</a></p>
<p>I do not know how to solve a system of equations by addition method.</p>	<p><a href="#">Solving systems by elimination 2</a></p> <p><a href="#">Solving systems by elimination 3</a></p> <p><a href="#">Solving Systems of Equations by Elimination</a></p> <p><a href="#">Solving Systems of Equations by Multiplication</a></p>

I do not know how to solve word problems involving systems of equations.	<a href="#"><u>Solving systems by elimination</u></a>
Number Problems	<a href="#"><u>Graphical Systems Application Problem</u></a>
Rate Problems	<a href="#"><u>Addition Elimination Method 4</u></a>
	<a href="#"><u>Systems and rate problems</u></a>
	<a href="#"><u>Systems and rate problems 2</u></a>
	<a href="#"><u>Systems and rate problems 3</u></a>
Mixture Problems	<a href="#"><u>Mixture problems 1</u></a>
	<a href="#"><u>Mixture problems 2</u></a>
	<a href="#"><u>Mixture problems 3</u></a>

### PRT on Functions

<b>Obstacles</b>	<b>KhanAcademy.org videos</b>
I do not know the meaning of a function.	<a href="#"><u>Introduction to functions</u></a>
I do not know what a functional relationship is.	<a href="#"><u>Functional Relationships 1</u></a>
I do not know whether a given graph is a function.	<a href="#"><u>Testing if a relationship is a function</u></a>
I do not know how to graph a function.	<a href="#"><u>Graphing a Basic Function</u></a>

### Intermediate and College Algebra

#### PRT on Linear Inequalities

<b>Obstacles</b>	<b>KhanAcademy.org videos</b>
I do not know the meaning of solution of linear inequality.	<a href="#"><u>Inequalities on a number line</u></a>
I do not know where to start.	<a href="#"><u>One-Step Inequalities</u></a>
	<a href="#"><u>One-Step Inequalities 2</u></a>

I do not know how to remove parentheses.	<a href="#"><u>Multi-Step Inequalities</u></a>
I do not know how to combine like terms.	<a href="#"><u>Multi-Step Inequalities 2</u></a>
I do not know the meaning of transpose. I do not know how to isolate the unknown.	<a href="#"><u>Inequalities Using Addition and Subtraction</u></a> <a href="#"><u>Inequalities Using Multiplication and Division</u></a>
I do not know how to graph a solution of an inequality.	<a href="#"><u>Inequalities on a number line</u></a>

### PRT on Absolute Value Equations

Obstacles	KhanAcademy.org videos
I do not know the meaning of absolute value of an algebraic expression.	<a href="#"><u>Absolute Value Equations</u></a>
I do not know how to remove absolute values.	
I do not know how to solve linear equations.	
I do not know how to remove absolute values. I do not know how to solve linear equations.	
I do not know how many solutions an absolute value equation has.	<a href="#"><u>Absolute Value Equation Example 2</u></a>

### PRT on Absolute Value Inequalities

Obstacles	KhanAcademy.org videos
I do not know how to break up an absolute value inequality into compound inequalities.	<a href="#"><u>Absolute Value Inequalities</u></a> <a href="#"><u>Absolute Inequalities 2</u></a>
I do not know whether a compound inequality is with 'or' or 'and'.	<a href="#"><u>Compound Inequalities</u></a> <a href="#"><u>Compound Inequalities 2</u></a>
I do not know how to solve compound inequalities with 'or' or 'and'.	

### PRT on Systems of (linear) Equations of Three Unknowns

Obstacles	KhanAcademy.org videos
I do not know the meaning of systems of equations	<a href="#"><u>systems of equations</u></a> <a href="#"><u>Systems of Three Variables</u></a>
I do not know the application of a system of equations in three variables.	<a href="#"><u>Three Equation Application Problem</u></a>

### PRT on Functions

Obstacles	KhanAcademy.org videos
I do not know the meaning of a function.	<a href="#"><u>Introduction to functions</u></a>
I do not know what a functional relationship is.	<a href="#"><u>Functional Relationships 1</u></a>
I do not know whether a given graph is a function.	<a href="#"><u>Testing if a relationship is a function</u></a>
I do not know how to graph a function.	<a href="#"><u>Graphing a Basic Function</u></a>
I do not know how to evaluate a function at a given value.	<a href="#"><u>Evaluating Functions</u></a>
I do not know how to add, subtract, multiply or divide functions.	<a href="#"><u>Sum of Functions</u></a> <a href="#"><u>Difference of Functions</u></a> <a href="#"><u>Product of Functions</u></a> <a href="#"><u>Quotient of Functions</u></a>

### PRT on Complex numbers

Obstacles	KhanAcademy.org videos
I do not know what a complex number is.	<a href="#"><u>Introduction to i and Imaginary Numbers</u></a>



<p>I do not know how to convert a square root of a negative number into an imaginary number.</p> <p>I do not know how to add or subtract complex numbers.</p>	<p><a href="#"><u>Complex Numbers (part 1)</u></a></p> <p><a href="#"><u>Adding Complex Numbers</u></a></p> <p><a href="#"><u>Subtracting Complex Numbers</u></a></p>
<p>I have difficulty multiplying complex numbers</p>	<p><a href="#"><u>Multiplying Complex Numbers</u></a></p>
<p>I have difficulty dividing complex numbers.</p>	<p><a href="#"><u>Dividing Complex Numbers</u></a></p> <p><a href="#"><u>Complex Numbers (part 2)</u></a></p>

#### **PRT on Solving Quadratic Equations by Completing the Square**

<b>Obstacles</b>	<b>KhanAcademy.org videos</b>
<p>I do not know how what a perfect square is.</p> <p>I do not know how to write a perfect square trinomial as the square of a binomial.</p> <p>I do not know how to complete the square</p>	<p><a href="#"><u>Completing the square</u></a></p>
<p>I do not know how to solve a quadratic equation by completing the square.</p>	<p><a href="#"><u>Solving Quadratic Equations by Completing the Square</u></a></p>

#### **PRT on Using the Quadratic Formula**

<b>Obstacles</b>	<b>KhanAcademy.org videos</b>
<p>I do not know what standard form is</p>	<p><a href="#"><u>Quadratic Equations in Standard Form</u></a></p>

I do not know what the quadratic formula is.	<a href="#"><u>CA Algebra I: Quadratic Equation</u></a>
I have difficulty substituting into the formula.	<a href="#"><u>Quadratic Formula 1</u></a> <a href="#"><u>Quadratic Formula 2</u></a> <a href="#"><u>Quadratic Formula 3</u></a> <a href="#"><u>Applying the Quadratic Formula</u></a>
I have difficulty applying quadratic formula in word problems	<a href="#"><u>Application-problem-with-quadratic-formula</u></a>

### PRT on Radicals

<b>Obstacles</b>	<b>KhanAcademy.org videos</b>
I do not know how to take nth root of a number.	<a href="#"><u>Understanding-exponents-2</u></a>
I do not know what a rational (fractional) exponent of a number is.	<a href="#"><u>Negative-exponent-intuitions</u></a>
I do not know how to write radical as a rational exponent.	<a href="#"><u>Zero--negative--and-fractional-exponents</u></a>
	<a href="#"><u>Level-3-exponents</u></a>
I do not know how to find a rational root of an algebraic monomial.	<a href="#"><u>Rational-exponents-and-exponent-laws</u></a> <a href="#"><u>More Rational Exponents and Exponent Laws</u></a>
I do not know how to take a fractional power of a product. I do not know how to take a fractional power of a quotient. I do not know how to simplify the fractional power of a monomial.	<a href="#"><u>Simplifying Expressions with Exponents</u></a> <a href="#"><u>Fractional Exponent Expressions 1</u></a> <a href="#"><u>Fractional Exponent Expressions 3</u></a> <a href="#"><u>Radical Equivalent to Rational Exponents 2</u></a>
I do not know how to add like radicals. I do not how to simplify add radical expressions.	<a href="#"><u>More Simplifying Radical Expressions</u></a> <a href="#"><u>Radical Expressions with Higher Roots</u></a>

I do not know how to multiply and divide radicals.	<a href="#"><u>Multiply and Simplify a Radical Expression 1</u></a>  <a href="#"><u>Multiply and Simplify a Radical Expression 2</u></a>
I do not know how to rationalize when the denominator is a square root of a monomial. I do not know how to rationalize when the denominator is a binomial involving radicals.	<a href="#"><u>How to Rationalize a Denominator</u></a>
I do not know how to solve an equation with a single radical containing the unknown.  I do not know how to isolate a single radical containing the unknown in an equation.	<a href="#"><u>Solving Radical Equations</u></a>  <a href="#"><u>Solving Radical Equations 3</u></a>  <a href="#"><u>Applying Radical Equations 2</u></a>
I do not know how to check for extraneous solutions.	<a href="#"><u>Extraneous Solutions to Radical Equations</u></a>

#### **PRT on Parabolas with Vertical Axis**

<b>Obstacles</b>	<b>KhanAcademy.org videos</b>
I do not know the axis and vertex of a parabola.  I do not know how to find the coordinates of the vertex of a parabola.  I do not know how to complete the square.  I do not know how to find the maximum or minimum of a parabola.	<a href="#"><u>Quadratic Functions 2</u></a>  <a href="#"><u>Quadratic Functions 3</u></a>
I do not know how to graph a parabola.	<a href="#"><u>Quadratic Functions 1</u></a>  <a href="#"><u>Graphing a Quadratic Function</u></a>

#### **PRT on Conic Sections**

<b>Obstacles</b>	<b>KhanAcademy.org videos</b>
I do not know what a conic section is  I do not know what conic sections look like	<a href="#"><u>Introduction to Conic Sections</u></a>  <a href="#"><u>Algebra II: Conic Sections</u></a>

### PRT on Circles

Obstacles	KhanAcademy.org videos
I do not know the definition of a circle.  Given an equation of a circle in the standard form, I do not know how to find the center and radius of a circle.  I do not know how to graph the circle given an equation of the circle.	<a href="#">Conic Sections: Intro to Circles</a>  <a href="#">Language and Notation of the Circle</a>
I do not know how to convert a given equation of a circle in a standard form.	<a href="#">Conic Identification 3</a>

### PRT on Ellipses Centered in the Origin

Obstacles	KhanAcademy.org videos
I do not know what an ellipse is  I do not know what major and minor axes are  I do not know what a center of an ellipse is  I do not know what an equation of an ellipse in standard form	<a href="#">Conic Sections: Intro to Ellipses</a>  <a href="#">Foci of an Ellipse</a>
I do not know how to put an equation of ellipse in standard form  I do not know how to find a graph of an ellipse from its equation	<a href="#">Identifying Conics 1</a>

### PRT on Hyperbolas Centered in the Origin

Obstacles	KhanAcademy.org videos
I do not know what a Hyperbola is  I do not know what axes and vertex are  I do not know what asymptotes are	<a href="#">Conic Sections: Intro to Hyperbolas</a>  <a href="#">Conic Sections: Hyperbolas 2</a>

I do not know how to find a graph of a hyperbola from its equation	<a href="#"><u>Conic Sections: Hyperbolas 3</u></a>
I do not know how to put an equation of hyperbola in standard form	<a href="#"><u>Identifying Conics 2</u></a>

### PRT on Exponential Functions

<b>Obstacles</b>	KhanAcademy.org videos
I do not know how to graph an exponential function	<a href="#"><u>Graphing Exponential Functions</u></a>

### PRT of Logarithmic Functions

<b>Obstacles</b>	KhanAcademy.org videos
I do not know what a logarithm is	<a href="#"><u>Introduction to Logarithms</u></a>
I do not know how to write a logarithmic statement as an exponential statement	<a href="#"><u>Logarithmic Equations</u></a>
I do not know how to use a calculator to evaluate logarithms in base 10 and e	<a href="#"><u>Natural Logarithm with a Calculator</u></a>  <a href="#"><u>Calculator for Natural Logarithms</u></a>
I do not know the properties of logarithms	<a href="#"><u>Introduction to logarithm properties</u></a>  <a href="#"><u>Introduction to logarithm properties (part 2)</u></a>
I do not know how to expand logarithmic expression	<a href="#"><u>Sum of Logarithms with Same Base</u></a>  <a href="#"><u>Using Multiple Logarithm Properties to Simplify</u></a>

I do not know how to condense a logarithmic expression to a single logarithm	<a href="#"><u>Proof: <math>\log a + \log b = \log ab</math></u></a>
I do not know how to use a calculator to evaluate logarithms in arbitrary bases	<a href="#"><u>Change of Base Formula</u></a>
I do not know how to solve a logarithmic equation with a single logarithm on one side	<a href="#"><u>Logarithmic Equations</u></a>
I do not know how to solve a logarithmic equation with several logarithms on each side	<a href="#"><u>Solving Logarithmic Equations</u></a>

### PRT on Right Triangle Trigonometry

<b>Obstacles</b>	KhanAcademy.org videos
I do not know what right triangle is	<a href="#"><u>Acute Right and Obtuse Angles</u></a>
I do not know what the sum of the angles in the triangle is	<a href="#"><u>Proof - Sum of Measures of Angles in a Triangle are 180</u></a>
I do not know the Pythagoras' theorem	<a href="#"><u>Introduction to the Pythagorean Theorem</u></a>  <a href="#"><u>The Pythagorean Theorem</u></a>
I do not know definitions of sine, cosine, and tangent	<a href="#"><u>Basic Trigonometry</u></a>
I do not know how to solve right triangle	<a href="#"><u>Basic Trigonometry II</u></a>  <a href="#"><u>CA Geometry: More Trig</u></a>

## PRT on Sequences and Series

Obstacles	KhanAcademy.org videos
I do not know what sequences and series are I do not know what arithmetic sequences are	<a href="#"><u>Sequences and Series (part 1)</u></a>
I do not know how to find the n-th term of arithmetic sequences I do not know how to find the sum of arithmetic series	<a href="#"><u>Sequences and Series (part 1)</u></a>
I do not know what geometric sequences are I do not know how to find the n-th term of geometric sequences	<a href="#"><u>Sequences and series (part 2)</u></a> <a href="#"><u>Geometric Sequences (Introduction)</u></a>
I do not know how to find the sum of geometric series	<a href="#"><u>Sequences and series (part 2)</u></a>