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Record Keeping: Algebra 2

			Date				Test Score					Proficiency			
Pretest (Unit Test I)															
_			LES	TEACH	SYSTEMA			IC R	EVIEW	н	Lesson	Test			
			Α	В	BACK		С		DE			Test	Date		
	1 Ex	ponents][
	2 Ra	tional Expressions													
		ientific Notation; mbining Like Terms													
	4 Radicals, Basic Operations, and Simplifying														
		ctoring Polynomials; tional Expressions													
	6 Fra	actional Exponents													
		aginary and mplex Numbers													
	8 Co	njugate Numbers													
		uares, Cubes, and scal's Triangle													
•	10 Bir	nomial Theorem													
		Date			Test Score					_	Proficiend	су.			
	Posttest (Unit Test I)														
				LE	SSON OB	JE	CTIVES								
	Lesson	1 Exponents					Lesson	3	Scie	ntific Nota	ition; Co	ombining Like	Terms		
	A2.1.a	Simplify an expressi negative exponents		-			A2.3.a		State the number of significant digits in a given number						
		exponents are posit	tive				□ A2.3.b					dition and mu rrect number			
	Lesson	· · · · ·							•	ificant digi	-	nect number	01		
	A2.2.a Identify restricted values for variables in t denominator of a rational expression		1 the		A2.3.c	.c Convert numb scientific nota			pers to and from ation						
	A2.2.b Perform addition and rational expressions						A2.3.d				livide using scientific notation				
	A2.2.c	Rewrite a rational ex	xpression	in simples	t form		A2.3.e		lden	tify the ter	ms in an	n algebraic ex	pression		
							Lesson	4			-	tions, and Sir			
							A2.4.a		with	terms con	taining r				
							A2.4.b		with	terms con	taining r				
							A2.4.c				•	sions by remo der the radica	0		
							A2.4.d			decimal a g a calcula		ations of irrat	ional roots		



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Lesson 5	Factoring Polynomials; Rational Expressions
□ A2.5.a	Factor second-order polynomials into two binomial factors
□ A2.5.b	Use vertical multiplication to factor second-order polynomials, where the coefficient of the squared term is not one, into two binomial factors
□ A2.5.c	Use FOIL to factor second-order polynomials, where the coefficient of the squared term is not one, into two binomial factors
□ A2.5.d	Factor second-order polynomials into two binomial factors using vertical multiplication, where some terms are negative
□ A2.5.e	Factor second-order polynomials into two binomial factors using FOIL, where some terms are negative
□ A2.5.f	Identify common factors as the first step to factoring a polynomial
□ A2.5.g	Use repeated factoring to factor a polynomial completely
🗆 A2.5.h	Factor to solve quadratic equations
🗆 A2.5.i	Simplify compound rational expressions
Lesson 6	Fractional Exponents
□ A2.6.a	Rewrite a radical expression as a base with a fractional exponent
□ A2.6.b	Rewrite a base with a fractional exponent as a radical expression
Lesson 7	Imaginary and Complex Numbers
🗆 A2.7.a	Define the imaginary number i
□ A2.7.b	Simplify radicals with negative numbers by factoring out i ² (-1)
□ A2.7.c	Define a complex number as a number of the form <i>a</i> + <i>b</i> i
□ A2.7.d	Perform arithmetic operations on complex numbers
Lesson 8	Conjugate Numbers
□ A2.8.a	Write the conjugate of a real or complex binomial
□ A2.8.b	Use the conjugate to rationalize the denominator of a real or complex fraction
Lesson 9	Squares, Cubes, and Pascal's Triangle
🗆 A2.9.a	Write the square of a given binomial
□ A2.9.b	Write the square root of a given perfect-square second-degree polynomial
□ A2.9.c	Write the cube of a given binomial
□ A2.9.d	Write an arbitrary number of rows of Pascal's triangle
□ A2.9.e	Use Pascal's triangle to determine the coefficients for the terms of the expansion of a binomial raised to a power

Lesson 10 Binomial Theorem

□ A2.10.a	Describe the pattern of exponents of terms generated when raising a binomial to any power
□ A2.10.b	Combine knowledge of coefficients and exponents to raise a binomial to any power
□ A2.10.c	Generalize knowledge of coefficients and exponents in expanded binomials, using the binomial theorem
□ A2.10.d	Apply the binomial theorem to raise a binomial to any power

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Record Keeping: Algebra 2

_				Date		Test Score					Proficiency			
Pretest (Unit Test II)														
		_		SON TICE B	TEACH BACK		SYSTE C		fic r D	eview E	н	Lesson Test	Test Date	
1	l 1 Comp Squa	pleting the re												
1	12 Quadratic Formula													
1	3 Discr	iminants				1								
1	14 Applications Using Percent													
1	5 Isolat	ing One Variable												
1	6 Ratio	S												
1	7 Unit I	Multipliers												
1	8 Dista Time	nce = Rate ×												
1	9 More	Motion Problems												
			Date			Test Score				Proficiend	cy			
	Posttest	(Unit Test II)												
		-		LE	SSON OB	JE	CTIVES				-			
	Lesson 11	Completing the Squ					Lesson	16	Rati	05				
	A2.11.a	Complete the squar adding a quantity to	e in a poly				A2.16.a		Set	up a propo		sed on inform tween two qu		
	A2.11.b	Use completing the solving a second-de			of		A2.16.b					in a proportio	on	
	A2.11.c	Check irrational roo				_	Lesson A2.17.a	17		Multiplie ate unit mu				
		second-degree equ the roots to solve th		0			A2.17.a		lden		rrect uni	t multiplier to		
	Lesson 12	Quadratic Formula					A2.17.c			-	-	plier to conve	ert	
	A2.12.a	State the quadratic							it fro	om one un	t to anot	her		
	A2.12.b	Use the quadratic for solve quadratic equ					A2.17.d		need	ds to be us	sed base	times a unit n d on whether	a	
	Lesson 13	Discriminants							conv	ersion is i	n one, tv	vo, or three d	imensions	
	A2.13.a	Use the discriminan the solution to a qu			re of		Lesson A2.18.a		Solv	-	s involvi	ng movement	t	
	Lesson 14	Applications Using	Percent			_	10 h			ne object (t of two	
	A2.14.a	Calculate the result markup on a base p		entage			□ A2.18.b			-		ng movement ving the same		
	A2.14.b	Calculate original p	rice from p	ercentage	9		Lesson 19 More Motion							
	A2.14.c	and markup price Calculate the perce compound based or	-		in a		A2.19.a		two		persons	ng movement moving diffe		
	Lesson 15	Isolating One Varia	ble											

□ A2.15.a Manipulate a formula to isolate any variable

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				Date		Test Score			Proficiency					
Pretest (Unit Test III)														
			LESSON PRACTICE		TEACH BACK		SYSTE	МАТ	IC RI	EVIEW	н	Lesson	Test Date	
			Α	A B			С	[D	Е		Test	Date	
20		ing Lines: -Intercept Ila												
21	Parall Perpe Inequ	ndicular Lines;												
22	2 Distance Formula and Midpoint Formula													
23	23 Conic Sections: Circle and Ellipse													
24	Parab	ola												
25	Parab Minim	ola: Maxima and a												
26	Hyper	bola												
27	Solvin Equat	g Systems of ions												
28		, Consecutive ers, and Mixtures												
29		nd Boat-and- nt Problems												
30		g Equations with Variables	1											
31	Vecto	rs												
			Date			Test Score						Pr	oficiend	cy
Po	osttest (Unit Test III)												
				LE	SSON OB	JE	CTIVES							
Le	sson 20	Graphing Lines: Slo	ope-Interco	ept Formu	la		Lesson	21	Para	llel and P	erpend	iculaı	r Lines; Ir	nequalities
□ A2	2.20.a	Find the slope and graphed on the Car					A2.21.a			e the equa passing tl				to a given
□ A2	A2.20.b Find the slope and y represented by a giv						□ A2.21.b		Write the equation for a line perpendicular to given line, passing through a given point					
□ A2	2.20.c	Give the equation of Cartesian plane	he equation of a line graphed on th sian plane		he		□ A2.21.c G		Graph any linear inequality					
□ A2	 A2.20.d Describe the equati relationship betwee independent variabl 		en a depen		an		Lesson A2.22.a		Compute the c		nula and Midpoint Formula distance between two points on 1 the distance formula			
□ A2	2.20.e	Find the equation in given the slope and	-		n when		A2.22.b)		pute the r Iph, using	-			points on
🗆 A2	2.20.f	Find the slope whe	n given two	o points or	n a line		Lesson	23	Coni	c Section	s: Circl	e and	Ellipse	
□ A2	2.20.g	Find the equation in given two points on	-	ercept forr	n when		A2.23.a		State	e the cente n its equa	er and r		-	le,





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_	Lesson 24				
	A2.24.a	Plot points and sketch a parabola,	п	A2.30.a	Solving Equations with Three Variables Solve a system of three equations
	A2.24.0	given its equation			
	A2.24.b	Plot points and sketch a hyperbola, given its equation		Lesson 31 A2.31.a	Vectors Add two or more right-angle vectors
	A2.24.c	Estimate the coefficient of the squared term of the equation for a parabola, given its graph			
	A2.24.d	State the equation for a parabola, given the graph and three stated points on the parabola			
	Lesson 25	Parabola: Maxima and Minima			
	A2.25.a	Compute the axis of symmetry for any parabola, given its equation			
	A2.25.b	Compute the vertex of any parabola, given its equation			
	A2.25.c	Describe how the components of the standard form of the equation of a parabola affect the graph, in terms of geometric transformation			
	A2.25.d	Apply parabolas to area optimization problems			
	Lesson 26	Hyperbola			
	A2.26.a	Give an example of an inverse relationship			
	A2.26.b	Identify an equation of the form $xy = a$ constant as a hyperbola			
	A2.26.c	Identify an equation of the form $ay^2 - bx^2 = n^2$ as a hyperbola			
	Lesson 27	Solving Systems of Equations			
	A2.27.a	Graph a pair of equations when one or both are conic			
	A2.27.b	Find the solution of a system of linear or conic equations			
	Lesson 28	Coins, Consecutive Integers, and Mixtures			
	A2.28.a	Write a system of equations to solve coin problems			
	A2.28.b	Solve a system of equations representing a coin problem			
	A2.28.c	Write a system of equations to solve consecutive integer problems			
	A2.28.d	Solve a system of equations representing a consecutive integer problem			
	A2.28.e	Write a system of equations to solve a mixture problem			
	A2.28.f	Solve a system of equations representing a mixture problem			
	Lesson 29	Age and Boat-and-Current Problems			
	A2.29.a	Write an equation or system of equations to solve a problem involving age			
	A2.29.b	Solve equation(s) representing a problem involving age			
	A2.29.c	Write a system of equations to solve a boat-and-current problem			
	A2.29.d	Solve a system of equations representing a boat-and-current problem			