## Algebra 1.5

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## **June 2022**

Content	Skills	Learning Targets	Assessment	Standards Reference	Resources & Technology
CEQ:		Chapters 1-3 Review		Chapter 1-3:	Prentice Hall Algebra
		Variables, Function			
• WHAT		Patterns, and		Mn State Standard	
PRIOR		Graphs		8.2.3.2	
KNOWLEDG		LT1. I can simplify			
E DO		expressions using		Mn State Standard	
STUDENTS		order of operations.	A. Simplification of	8.2.4.2	
NEED TO BE			Expressions		
SUCCESSFU	A. Simplification of	<b>Rational Numbers</b>		Mn State Standard	
L IN	Expressions	LT2. I can simplify		8.2.4.5	
ALGEBRA		expressions using the			
1.5?	A1. Simplify	distributive property.			
• HOW DO	expressions using the				
WE	order of operations.	<b>Solving Equations</b>			
<b>OPERATE</b>	A2. Simplify				
WITH	expressions using the	LT3. I can solve	<b>B. Single Variable</b>		
POLYNOMI	distributive property.	algebraic equations	Equations		
ALS?		with one variable.	-		
• HOW CAN		LT4. I can set up and			
<b>OUADRATIC</b>	<b>B. Single Variable</b>	solve ratios and			
(2ND	Equations	proportions.			
DEGREE)		1 1	C. Solutions of		
EOUATIONS	B1. Solve algebraic	<b>Solving Inequalities</b>	Inequalities		
BE	equations in one		-		
SOLVED?	variable.	LT5. I can solve	CSA= A1-A2, B1-		
	B2. Set up and solve	inequalities with one	B2, C1-C3 Algebra 1		

Chapters 1-7 were	ratios and proportions.	variable.	Review Test #1		
completed in Algebra	1 1	LT6. I can graph	(Chapters 1-3)		
1. However, all main		inequalities on a	LT1: 1-9		
concepts will be		number line.	LT2: 5,6		
reviewed during the		LT7. I can solve and	LT3: 10-13		
first few weeks of the		graph compound	LT4: 14, 15		
Algebra 1.5 course.	C. Solutions of	inequalities with "and"	LT5: 16-20		
	Inequalities	or "or" statements.	LT6: 17-20		
A. Simplification of		LT8. I can graph and	LT7: 21, 22		
Expressions	C1. Solve inequalities	solve absolute value	LT8: 23-25		
	with variables on one	inequalities			
A1. Order of	or both sides of				
operations	equations.				
A2. Distributive	C2. Graph				
property	inequalities.			Chapter 5:	Chapter 5: Lessons
	C3. Solve and graph				5.1, 5.3, 5.4, 5.5, 5.6
<b>B.</b> Single Variable	compound inequalities			Mn State Standard	
Equations	with "and" or "or".			8.2.4.3	
BI. Multi-step			D. I		
equations			D. Linear Equations		
D2 Equations with			CSA = D1 D4		
D2. Equations with			Algebra 1 Review		
variables on both sides			Test #2 (Chanter 5)		
B3 Ratios and			(Chapter 5)		
nronortions		Chapter 5 Review	LT1: 1-6, 19		
Proportions	D. Linear Equations	Linear Equations	LT2: 7-11, 18, 25		
C. Solutions of	1	and Their Graphs	LT3: 16-19		
Inequalities	D1. Calculate slope		LT4: 18, 26		
- 1	using points, line, or	LT1. I can calculate	LT5: 19, 20		
	table.	slope using	LT6: 21-24		
	D2. Write equation of	two points, a line, or	LT7: 14, 15		

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C1. Multi-step inequalities	line in slope-intercept form. D3. Write equation of	a table of values. LT2. I can write a linear equation of a			
C2. Graphs of	line in standard form.	line in slope-intercept			
inequalities	D4. Write equation of	form.			
-	line in point-slope	LT3. I can write a	E. Systems of		
C3. Compound	form.	linear equation of a	Equations	Chapter 6	Chapter 6: Lessons
inequalities		line in standard form.			6.1, 6.2, 6.3, 6.4
		LT4. I can write a	CSA = E1 - E3	Mn State Standard	
		linear equation of line	Algebra 1 Review	8.2.4.7	
		in point-slope form.	Test #3 (Chapter 6)		
<b>D.</b> Linear Equations	E. Systems of	LT5. I can recognize	LT1: 1, 2		
	Equations	if two lines are	LT2: 3, 4		
D1. Slope		parallel or	LT3: 5-7, 12, 14, 16		
	E1. Solve a system of	perpendicular.	L14: 8-11, 13-15		
D2. Slope-intercept	equations by	L16. I can write an			
Iorm	E2 Solve a system of	equation that is			
D2 Standard form	E2. Solve a system of	perpendicular to			
D5. Standard Iorin	substitution	another line			
D4 Point slope form	E3 Solve a system of	LT7. I can recognize			
	equation using	and graph a linear			
	elimination.	inequality.	F. Exponents		
E. Systems of		1 2	I	Chapter 7:	Chapter 7: Lessons
Equations			CSA= F1-F6		7.1. 7.2. 7.3. 7.4. 7.5
-1		Chapter 6 Review	Algebra 1 Review	Mn State Standard	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
E1. Solving by		Systems of Equations	Test #4	8.1.1.4	
graphing		and Inequalities	LT1: 1-6, 12, 16, 17,		
	F. Exponents	LT1. I can identify if	21-26, 29	Mn State Standard	
E2. Solving by		a point is a solution to	LT2: 9, 10, 17, 28, 34	8.1.1.5	
substitution	F1. Simplify	a system.	LT3: 7, 8, 18, 20, 24,		
	expressions with	LT2. I can solve a	27, 29, 34		
	positive, negative,	system of	LT4: 11, 13, 30, 32,		

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E3. Solving by elimination	and/or zero exponents. F2. Multiply powers with the same base. F3. Raise a power to a power and a product	linear equations by graphing. LT3. I can solve a system of linear equations using	33 LT5: 14, 15, 19, 30- 33		
F. Exponents	to a power. F4 Divide powers	substitution.			
F1. Multiplication of	with the same base.	system of linear			
expressions containing	F5. Raise a quotient	equations using			
exponents	F6. Write equations	elimination.			
F2. Division of	to model exponential				
expressions containing	growth and decay	Chapter 7 Review			
exponents	situations.	Exponential			
F3. Exponential		Functions			
growth and decay		LT1. I can simplify expressions with positive, negative, and zero exponents. LT2. I can multiply powers with the same base. LT3. I can simplify a power to a power and a product to a power. LT4. I can divide powers with the same base. LT5. I can raise a			
		quotient to a power.			

October

Content	Skills	Learning Targets	Assessment	Standards Reference	Resources & Technology
,S ,S		Polynomials and		Chapter 8:	Chapter 8: Lessons
UEQ:		Factoring		-	8.1, 8.2, 8.3, 8.4, 8.5,
• <i>How are polynomials</i>		LT1. I can write a		Mn State Standard	8.6, 8.7, 8.8
categorized by degree		polynomial in standard		9.2.3.2	
and by number of		form.			
terms?		LT2. I can classify		Mn State Standard	
• How are polynomials		polynomials by degree		9.2.3.3	
added, subtracted, and		and by number of			
multiplied?	A. Operations with	terms.	A. Operations with		
• How are polynomials	Polynomials	LT3. I can add and	Polynomials		
factored?		subtract polynomials	U U		
U. C.	A1. Classify	by combining like			
A. Operations with	polynomials by degree	terms.			
Polynomials	and by number of	LT4. I can multiply			
v	terms.	polynomials by			
A1. Classification of	A2. Add and subtract	distributing.			
polynomials	polynomials by	LT5. I can multiply			
A2. Addition and	combining like terms.	polynomials by using			
subtraction of	A3. Multiply	FOIL.			
polynomials	polynomials of		<b>B.</b> Factors of a		
A3. Multiplication of	various degree and	LT6. I can factor out	Polynomial		
polynomials	with different	a Greatest Common	U U		
1 ,	numbers of terms.	Factor (GCF).			
		LT7. I can factor a			
		difference of squares.	CSA= A1-A3 and		
	<b>B.</b> Factors of a	LT8. I can factor a	B1-B4 Chapter 8		
	Polynomial	trinomial with a	Test		
B. Factors of a	U	coefficient when $a = 1$ .	LT1: 1, 2		

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<b>Polynomial</b> B1. Factorization of a polynomial	<ul> <li>B1. Factor a monomial from a polynomial (GCF).</li> <li>B2. Factor a difference of squares.</li> <li>B3. Factor a trinomial into two binomials.</li> <li>B4. Factor a polynomial with four or more terms by grouping.</li> </ul>	LT9. I can factor a trinomial with a leading coefficient not equal to 1. LT10. I can factor a polynomial with four terms by grouping.	LT2: 1, 2 LT3: 3-6, 16, 17, 19 LT4: 7-9, 14 LT5: 10-13, 15, 18, 19 LT6: 20-23 LT7: 25, 31 LT8: 24, 26-28, 32, 37 LT9: 30, 34, 35, 36a LT10: 29, 33		
November	1	1	1	1	
Content	Skills	Learning Targets	Assessment	Standards Reference	Resources & Technology
UEQ: • How are quadratic equations graphed? • How can quadratic equations be solved? • How is data best modeled using linear, exponential, or quadratic equations? A. Quadratic	A. Quadratic Function (Parabola) A1. Identify vertex of parabola.	Quadratic Equations and Functions LT1. I can identify the vertex of parabola. LT2. I can identify an axis of symmetry of parabola. LT3. I can graph a quadratic function with at least five points of accuracy. LT4. I can graph a quadratic inequality with at least five	A. Quadratic Function (Parabola)	Chapter 9: Mn State Standard 9.2.1.5 Mn State Standard 9.2.1.6 Mn State Standard 9.2.2.1 Mn State Standard 9.2.2.3	Chapter 9: Lessons 9.1, 9.2, 9.3, 9.4, 9.6

Function (Parabola)	A2. Identify axis of	points of accuracy.		
	symmetry of parabola.	LT5. I can recognize		
A1. Identification of	A3. Graph quadratic	how a graph is		
vertex of parabola	function with at least	transformed based on		
A2. Identification of	five points of	the function.	B. Quadratic	
axis of symmetry of	accuracy.	LT6. I can solve	Equations	
parabola		a quadratic equation		
A3. Graph of		by using square roots.		
quadratic function	<b>B. Quadratic</b>	LT7. I can solve		
	Equations	a quadratic equation		
		by graphing the		
B. Quadratic	B1. Solve quadratic	corresponding		
Equations	equation by using	function.		
	square roots.	LT8. I can solve a		
	B2. Solve quadratic	quadratic equation by		
B1. Use of square	equation by graphing	factoring and using		
roots to solve	the corresponding	zero-product property.	C. Models for Data	
B2. Use of graphs to	function.	LT9. I can solve a		
solve	B3. Solve quadratic	quadratic equation by	CSA= A1-A3, B1-B6,	
B3. Use of factoring	equation by factoring	using the quadratic	C1-C2 Chapter 9	
to solve	and using zero-	formula.	Test	
B4. Use of quadratic	product property.	LT10. I can interpret		
formula to solve	B4. Solve quadratic	what the discriminant	LT1: 2, 5-7, 23	
B5. Interpretation of	equation by using the	reveals about the	LT2: 5-7	
discriminant	quadratic formula.	number of solutions.	LT3: 8-9	
	B5. Interpret what the	LT11. I	LT4: 10	
	discriminant reveals	can determine the type	LT5: 1-4	
	about the number of	of graph represented	LT6: 11, 12, 22	
	solutions.	based on a table of	LT7: 20, 21	
		values.	LT8: 13-15	
	C. Models for Data		LT9: 16, 17, 24	
C. Models for Data			L110: 18, 19	
	C1. Choose		LTTT: 25, 26	

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C1. Graph of data / Appropriate model C2. Equation to model data	appropriate model by graphing the data. C2. Write equation to model the data.				
December					
Content	Skills	Learning Targets	Assessment	Standards Reference	Resources & Technology
<ul> <li>UEQ:</li> <li>*How do we simplify and combine radicals?</li> <li>*How do we solve radical equations?</li> <li>*How do we graph radical functions?</li> <li>*How can we use right triangle trigonometry?</li> <li>A. Radical Expressions and Equations</li> <li>A1. Simplification radicals</li> <li>A2. Operations with radical expressions</li> <li>A3. Solving of radical equations</li> <li>A4. Graphing</li> </ul>	A. Radical Expressions and Equations A1. Simplify radicals involving products and quotients and by rationalizing denominators. A2. Operate with radical expressions by simplifying sums, differences, products, and quotients. A3. Solve equations containing radicals and eliminate extraneous solutions. A4. Graph square root functions and translate graphs of square root functions. A5. Use Pythagorean Theorem to determine	Radical Expressions and Equations LT1. I can simplify radicals involving products and quotients and by rationalizing denominators. LT2. I can simplify radical expressions by using sums and differences. LT3. I can simplify radical expressions by using distributive property and/or FOIL. LT4. I can solve equations containing radicals and eliminate extraneous solutions. LT5. I can rationalize the denominator of a radical by using the conjugate. LT 6. I can graph	CSA= Chapter 10 Test A1-A4 CSA= Chapter 10 Quiz A5-A6 LT1: 1, 4-8 LT2: 2, 3, 10, 11 LT3: 9-11 LT4: 13-18 LT5: 12 LT6: 20-23 LT7: 24 LT8: 24-27 LT9: 28, 29	Chapter 10: Mn State Standard 9.2.2.3 Mn State Standard 9.2.3.1 Mn State Standard 9.2.4.7	Chapter 10: Lessons 10.2, 10.3, 10.4, 10.5

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of square root functions A5. Pythagorean Theorem A6. Trigonometric ratios	missing side length. A6. Find trigonometric ratios and use angles of elevation and depression.	square root functions and translate graphs of square root functions. LT7. I can use the Pythagorean Theorem to determine missing side length. LT8. I can find trigonometric ratios. LT9. I can solve angles of elevation and depression using trigonometric ratios.			
January			1		
Content	Skills	Learning Targets	Assessment	Standards Reference	Resources & Technology
WEQ: *How do we graph rational functions?	A. Rational Expressions and Functions	<b>Rational Expressions</b> and Functions LT1. I can graph	CSA= Chapter 11 Test A1-A8	Chapter 11: Mn State Standard	Chapter 11: Lessons 11.1, 11.2, 11.3, 11.4, 11.5, 11.7

A. Kational	Rational Expressions	CSA-Chapter II	Chapter 11:	Chapter 11: Lesson
<b>Expressions and</b>	and Functions	Test A1-A8		11.1, 11.2, 11.3, 11
Functions	LT1. I can graph		Mn State Standard	11.5, 11.7
	rational functions.	LT1: 1-3, 28	9.2.1.1	
A1. Graph rational	LT2. I can simplify	LT2: 4-7		
functions and identify	rational expressions.	LT3: 8-14	Mn State Standard	
types of functions.	LT3. I can multiply &	LT4: 15, 16	9.2.1.2	
A2. Simplify rational	divide rational	LT5: 17, 18, 27		
expressions.	expressions.	LT6: 19-22	Mn State Standard	
A3. Multiply & divide	LT4. I can divide	LT7: 23-26	9.2.1.3	
rational expressions.	polynomials by a	LT8:		
A4. Divide	monomial.		Mn State Standard	
polynomials by a	LT5. I can divide		9.2.1.7	
monomial and by	polynomials by using			
	A. Rational Expressions and Functions A1. Graph rational functions and identify types of functions. A2. Simplify rational expressions. A3. Multiply & divide rational expressions. A4. Divide polynomials by a monomial and by	A. KatonalKatonal ExpressionsExpressions andand FunctionsFunctionsLT1. I can graph rational functions.A1. Graph rationalLT2. I can simplifyfunctions and identifyrational expressions.LT3. I can multiply ÷ rationalexpressions.Expressions.A3. Multiply & divideLT4. I can divide polynomials by a monomial and bypolynomials by usingLT5. I can divide	A. KatonalKatonal ExpressionsCSA- Chapter IIExpressions andand FunctionsTest A1-A8FunctionsLT1. I can graph rational functions.Test A1-A8A1. Graph rationalLT2. I can simplifyLT1: 1-3, 28A1. Graph rationalLT2. I can simplifyLT2: 4-7functions and identifyrational expressions.LT3: 8-14types of functions.LT3. I can multiply &LT4: 15, 16A2. Simplify rationaldivide rationalLT5: 17, 18, 27expressions.expressions.LT4. I can divideA3. Multiply & divideLT4. I can divideLT7: 23-26rational expressions.LT5. I can divideLT8:A4. DivideDolynomials by aLT5. I can dividemonomial and bypolynomials by usingLT5. I can divide	A. KationalKational ExpressionsCSA- Chapter IIChapter IIExpressions and Functionsand FunctionsTest A1-A8Mn State StandardFunctionsLT1. I can graph rational functions.LT1: 1-3, 289.2.1.1A1. Graph rational functions and identify types of functions.LT2. I can simplify rational expressions.LT3: 8-14Mn State StandardA2. Simplify rational expressions.LT3. I can multiply & divide rationalLT5: 17, 18, 279.2.1.2A3. Multiply & divide rational expressions.LT4. I can divide monomial.LT7: 23-269.2.1.3A4. Divide polynomials by a monomial and byLT5. I can divide polynomials by usingMn State Standard 9.2.1.7Mn State Standard 9.2.1.3

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direct and inverse variation equations? A. Rational Expressions and Functions A1. Graphing of rational functions A2. Simplifying of rational expressions A3. Multiplication & division of rational expressions A4. Division of polynomials A5. Addition & subtraction of rational expressions A6. Solving of rational equations A7: Write and solve direct and inverse variation equations.	using long division. A5. Add & subtract rational expressions with like and unlike denominators. A6. Solve rational equations including proportions. A7: Solve direct and inverse variation equations.	long division. LT6. I can add & subtract rational expressions using common denominator s. LT7. I can solve rational equations including proportions. LT8. I can solve direct and inverse variation equations.		Mn State Standard 9.2.3.4	
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Content	Skills	Learning Targets	Assessment	Standards Reference	Resources & Technology

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<ul> <li><i>What are some ways</i> to display and interpret data?</li> <li><i>How are probability</i> and odds calculated?</li> <li><i>How do we find</i> permutations and combinations?</li> <li><b>A. Probability and</b> <b>Odds</b></li> <li>A1. Calculation of Probability A2. Calculation of Odds</li> <li><b>B. Permutation and</b> <b>Combinations</b></li> <li>B1. Counting methods and permutations B2. Combinations</li> </ul>	<ul> <li>A. Probability and Odds</li> <li>A1. Calculate experimental probability of event occurring.</li> <li>A2. Calculate theoretical probability of event occurring.</li> <li>A3. Calculate the probability of compound events - both independent and dependent.</li> <li>B. Permutation and Combinations</li> <li>B1. Use counting methods including the fundamental counting principle.</li> <li>B2. Find permutations.</li> <li>B3. Find combinations.</li> </ul>	LT1. I can calculate experimental probability of event occurring. LT2. I can calculate theoretical probability of event occurring. LT3. I can find the probability of independent and dependent events. LT4. I can find permutations. LT5. I can find combinations. LT6. I can use the counting method. LT7. I can find the probability of mutually exclusive and overlapping events. LT 8. I can calculate the odds of an event occurring.	A. 11 (Dability and Odds B. Permutation and Combinations CSA= A1-B3, B1-B3 Probability (Ch12) Test LT1: 1 LT2: 2, 3 LT3: 14, 15, 17-21, 33 LT4: 24, 26-29 LT5: 25, 30-32 LT6: 22, 23, 34 LT7: 9-13, 16 LT8: 4-8 C. Displays and	Mn State Standard 9.4.3.1 Mn State Standard 9.4.3.5
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			Interpretation of		
			Data		
C. Displays and					
Interpretation of			CSA= C1-C10		
Data			Statistics (Ch		
			12) Test		
C1. Frequency	C. Displays and	Statistics	,		
Tables	Interpretation of				
C2. Line Plots	Data	LT1. I can construct	LT1: 1b		
C3. Bar Graphs &		and interpret	LT2: 4a, 10		
Histograms	C1. Construct and	frequency tables.	LT3: 1c, 2, 14		
C4. Line Graphs	interpret frequency	LT2. I can construct	LT4: 5, 13		
C5. Circle Graphs	tables.	and interpret line	LT5: 3, 12	Statistics:	
C6. Measures of	C2. Construct and	plots.	LT6: 4b, 8-10		
<b>Central Tendency</b>	interpret line plots.	LT3. I can construct	LT7: 1a, 9	Mn State Standard	
C7. Stem-and-Leaf	C3. Construct and	and interpret bar	LT8: 6, 11	9.4.1.1	
Plots	interpret bar graphs	graphs and	LT9: 7a,c		
C8. Box-and-	and histograms.	histograms.	LT10: 7b	Mn State Standard	
Whisker Plots	C4. Construct and	LT4. I can construct		9.4.1.3	
C9. Scatterplots	interpret line graphs.	and interpret line			
C10. Line of Best Fit	C5. Construct and	graphs.			
	interpret circle	LT5. I can construct			
	graphs.	and interpret circle			
	C6. Identify	graphs.			
	measures of central	LT6. I			
	tendency - mean,	can identify mean,			
	median, mode.	median, mode.			
	C7. Construct and	LT7. I can construct			
	interpret stem-and-	and interpret stem-			
	leaf plots.	and-leaf plots.			
	<b>C8.</b> Construct and	LT8. I can construct			
C1. Frequency Tables	interpret box-and-	and interpret box-and-			
C2. Line Plots	whisker plots.	whisker plots.			

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C3. Bar Graphs & Histograms C4. Line Graphs C5. Circle Graphs C6. Measures of Central Tendency C7. Stem-and-Leaf Plots C8. Box-and- Whisker Plots C9. Scatterplots C10. Line of Best Fit	C9. Construct and interpret scatterplots. C10. Find the line of best fit.	LT9. I can construct and interpret scatterplots. LT10. I can find the line of best fit.			
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Content	Skills	Learning Targets	Assessment	Standards Reference	Resources & Technology
			If time permits: CSA option= Final Exam (Part 1 - Chapters 1-9) CSA option= Final Exam (Part 2 - Chapters 10-12)		