Algebra 2 YAG 2020-2021

1st Nine Weeks		2nd Nine Weeks		3rd Nine Weeks		4th Nine Weeks	
Alg 1 review		**Polynomials**		**More Quadratics**		**Logrithmic functions**	
solve 1 variable multi-step equation		Add and Subtract		Quadratic formula		inverse logs and exponentials	
solve with fractions	**15 days**	exponent rules	**11 days**	Graph with a, h, and k	**15 days**	Graph and transform exponential and logrithmic functions	**15 days**
graph lines		Multiply 1x2, 1x3, 2x2, 2x3, 3x3		write quadratic equ from graph		Rewrite exponential equations as log equations and the reverse.	
a,h,k in lines		Long Division		add, subtract and multiply complex numbers		Solve logs and exponentials	
linear inequalities and set notation		Synthetic division		simplify *i*		Natural logs	
Absollute Value		**Factor**		**Algebra review**		**Rational functions**	
Solve Absolute Value Equations		Factor GCF		composite functions		review factoring	
Solve Absolute Value Inequalities	**12 days**	Factor by grouping	**14 days**	inverse functions	**12 days**	simplify rational expressions	**21 days**
graph absolute value with a, h, k		Factor when a = 1 and a ≠ 1		rational expontnts		multiply rational expresstion	
Write absolute value from graph		Difference of 2 squares				divide rational expresstion	
		perfect squres		**Radical Functions**		add and subtract rational exp	
Systems of equations and inequalities		Mixed Factoring		complex numbers			
Graph Linear Systems				Graph radical functions a, h, k		**Graph more functions**	
Graph linear inequalities		**Solve quadratics**		Graph cubic and cube root functions	**12 days**	Graph, transform and solve rational functions	
Applications systems		vocabulary		Solve equations with radical including extraneous solutions		solve rational equations	**12 days**
Write equations	**16 days**	solve by factoring	**9 days**			inverse variation	
solve/state if reasonable		simplify radicals		**Inverses**		horizontal and vertical	
Substitution				inverses for power and root			
Elimination				inverse square and cube roots	**10 days**		
No Solutions Infinite Solutions				exponential properties			
3 x 3 system							
linear and quadratic							
9 weeks test	**2 days**	**Semester** Review and exam	**5 days**	**9 weeks test**	**2 days**	**Semester** Review and exam	**5 days**

Algebra 2 PAP YAG 2020-2021

1st Nine Weeks

Topic	Days
syllabus and technology sign-on	12 days
Graph Linear Inequalites	
Graph System of Linear Inequalities	
Area/Perimeter on Coordinate plane - Activity - Quiz Grade	
2 X 2 Linear Systems Solved with Substitution Method	
2 X 2 Linear Systems Solved with Elimination Method	
Quiz over 2 x 2 Linear Systems	
Review on ALEKS for test 1.1	
Test 1.1	
Assign new ALEKS for unit	15 days
3 x 3 Linear Systems Solved by Elimination Method	
2 x 2 Gaussian Method for Systems	
2 x 2 and 3 x 3 with technology	
Add and Subtract Polynomials using function notation.	
Multiply Polynomials	
Long Division of Polynomials	
Synthetic Division of Polynomials	
Composite Functions	
Matrices Project	
Test 1.2	
Factor by GCF	10 days + 2 days
Factor by Grouping	
Factoring Trinomials	
Difference of Squares	
Factoring Sum and Difference of Cubes	
Test 1.3	
Intro to Quadratic Functions - what does a solution represent	

2nd Nine Weeks

Topic	Days
Solve Quadratics and Linear Systems - Algebraically	12 days
Solve Quadratics and Linear Systems - Technology	
Simplify Radicals with and without "I"	
Find the dicriminant and name number and type of solutions	
Solve using the Quadratic Formula with real and imaginary solutions	
Quadratics with Square Root Property	
Factoring Perfect Squares	
Test 2.1	
Factoring Perfect Square Trinomials	15 days
Solve by Completing the Square	
Mixed Factoring Review	
Introduce A, H, and K	
Graphing Quadratics from Vertex Form	
Change from Standard to Vertex Form of a Quadratic	
Test 2.2	
Power of Imaginary Numbers	
Operations with Imaginary Numbers	
Applications of Quadratic Functions - Launched/Dropped	
Applications of Quadratic Functions Project - Launched/Dropped	10 days + 2 days
Quadratic Inequalities with technology	
Quadratic Inequalities with Solutions in Interval Notations	
Quadratic Regression - one by hand and two with technology	
Test 2.3	
Semester Review and Exam	

Third Nine Weeks

Topic	Days
Inverse Functions	11 days
Horizontal line test	
Inverse of Linear, Quadratics, and Square Roots	
Graph Square Roots in A, H, and K Form	
Solve Square Root Equations	
Test 3.1	
Solve nth Root Radical	11 days
Radical Application Stations	
Simplyify square and cube roots with variables	
Graph and Write Cubic and Cube Roots in A, H, and K Form	
Exponent Rules	
Rational Exponents	
Test 3.2	
Graphing Absolute Value	10 days
Exponent Project Book Due	
Solving Absolute Value Equations	
Solve Absolute Value Inequalities	
Absolute Value Applications	
Graph Piecewise	18 days
Write Piecewise	
Laying the Foundation Piecewise puzzle	
Evaluate Piecewise Functions	
Test 3.3	
Graphing Exponential Functions	13 days
Solving Exponential with Common and Non-Common Base	
Rewrite logs to exponential and back	
Evaluate logs and Exponentials	
Inverse of logs and exponentials	
Graphing Application Problems - Growth, Decay, Compound Interest.	

Fourth Nine Weeks

Topic	Days
Expand Logs	7 days
Condense Logs	
Condense Logs to Solve	
Mixed Solving Logs	
Graphing Rational Functions	
Desmos Project	
Test 4.1	
Graphing Rationals with Quadratic Denominator	15 days
Horizontal Asymptote rules	
Factoring Review	
Simplifying Rationals	
Multiplying/Dividing Rationals	
Test 4.2	
Add/Subtract Rationals	14 days
Simplifying Complex Fractions	
Solve Rationals with LCD	
Cost Average/Percentage Word Problems	
Work Problems	
Direct variation/Inverse Variation	
Joint/Combined Variation	
Application Stations	12 days
Vertical Parabola Conic Sections	
Test 4.3	
Horizontal Parabola Conic Sections	8 days + 5 flex days
Parabola Conic Sections Applications	
Regression - Select the appropriate model	
Review all functions and how the "b" value effects graphs	
U-Substitution	
Flex Days and Review for Final	
Final	

Pre-College Algebra YAG 2020-2021							
1st Nine Weeks		**2nd Nine Weeks**		**3rd Nine Weeks**		**4th Nine Weeks**	
310 Review and Unit 1	10 days	310 Midterm	3 days	320 Unit 2 Test	11 days	320 Midterm	5 days
Welcome, Syllabus, Procedures, MML Setup		Review Units 1-4 - 3 days		2.3 Absolute Value Equations		Review 320 Units 2-5 - 3 days	
0.1 Simplifying Fractions		Midterm Exams - 2 days		2.6 Linear Inequalities		Midterm Exams - 2 days	
0.2 Adding and Subtracting Fractions				2.7 Compound Inequalities			
0.3 Multiplying and Dividing Fractions				2.8 Absolute Value Inequalities			
1.1, 1.2, 1,3 Add-Subtract-Multiply-divide Real Numbers				320 Unit 2 Test			
310 Unit 2 and 3	10 days	310 Unit 7	9 days	320 Unit 3'	10 days	320 Unit 6	14 days
2.1,2.2 Addition and Multiplication Principles		7.1 The Rectangular Cooordinate System		3.1 Graphing Linear Equations with 2 unknown variables		6.1 Rational Expressions Multiplying and Dividing	
2.3 Using Principles Together		7.2 Graphing Linear Equations		3.2 Slope of a Line		5.2/5.3 Dividning Polynomials/ Synthetic Divison	
2.4 Solving Equations with Fractions		7.3 The Slope of a Line		3.3 Graphs and the Equations of a Line		6.2 Adding and Subtracting Rational Expressions	
3.1 Translating English expressions into Algebraic Equations		7.4 Writing the Equation of a Line		3.4 Linear Inequalities in 2 variables		6.3 Complex Rational Expressions	
3.2 Using Equations to Solve Word Problems		310 Unit 7 Test		320 Unit 3 Test		6.4 Solving Rational Equations	
3.3 Solving Word Problems: Comparrisons						320 Unit 6 Test	
310 Unit 4	8 days	310 Unit 8	10 days	320 Unit 4	11 days	320 Unit 7	10 days
4.1 The Rules of Exponents		8.1 Soving Systems by Graphing		3.6 Graphing Functions from Equations and Tables of Data		7.5 Radical Equations	
4.2 Negative Exponents and Scientific Notation		8.2 Solving Systems by Substitution		4.1 Systems of Linear Equations in 2 Variables		7.6 Complex Numbers	
4.3 Fundamental Polynomial Operations		8.3 Solving Systems by Addition Method		4.2 Systems of Linear Equations in 3 Variables		320 Unit 7 Test	
4.4 Multiplying Polynomials		8.4 Review Methods for Systems		4.3 Applications of Linear Equations			
310 Unit 4 Test		8.5 Solving Word Problems		320 Unit 4 Test			
		310 Unit 8 Test					
310 Unit 5	10 days	310 Unit 9	12 days	320 Unit 5	15 days	320 Unit 8	14 days
5.1 Removing Common Factors		9.1 Square Roots		5.4 Removing Common Factors (Factor by Grouping)		8.1 Solving Quadratics	
5.2 Factor by Grouping		9.2 Simplifying Radical Expressions		5.5 Factoring Trinomials		8.2 Quadratic Formula	
5.4 Factor Trinomials		9.3 Adding and Subtracting Radical Expressions		5.6 Factoring Special Cases		8.4 Formulas and Applications	
5.3 Factor Trinomials; a=1		9.4 Multiplying Radical Expressions		5.7 Factoring a Polynomial Completely		8.5 Quadratic Functions	
5.7 Solving Quadratic Equations		9.5 Dividing Radical Expressions		5.8 Solving Equations and Applications using Polynomials		320 Unit 8 Test	
5.6 Review of Factoring		9.6 The Pythagorean Theorem - and Radicals		320 Unit 5 Test			
310 Unit 5 Test		310 Unit 9 Test					
		Semester Review	1 day			Semester Review	4 days
		Semester Exam				Semester Exam	