Algebra 2
Year at a Glance (YAG)
2021-2022

First Semester		Second Semester	
1st Nine Weeks – 40 days (August 19th – October 15th) (September 2nd – Labor day – No School) (October 14th – Staff Development)		**3rd Nine Weeks – 45 days** (January 6th – March 17th) (January 20th – MLK – No School) (March 9th – 13th – Spring Break)	
TEKS **111.40(C)** 4.C 6.C 6.D 6.E 6.F 6.G 7.I 8.A 8.B 8.C	**Tools for Algebra (ch 1)** (16 days) Students will perform orders of operations, simplify and evaluate algebraic expressions, solve equations in one variable, solve literal equations, solve inequalities in one variable, solve absolute value equations and inequalities **Linear Equations (Ch 2)** (12 days) Students will use equations of relations and functions, determine slope of a line, graph linear equations in all forms, solve real world linear problems, find domain and range (continuous vs discrete) and write in inequality and interval notation form. **Graphing - Transformations (Ch 2.5)** (12 days) Students will graph and tell key attributes of 3 parent functions ($f(x)=x^2$, $f(x)=\sqrt{x}$, $f(x)=|x|$) and apply vertical and horizontal translations and dilations. RTI one day,	7.B 7.C 7.D 7.E 7.F 6.A 6.B 4.E 4.F 4.G 4.H	**Quadratic Equations (Ch 4)** (8 days) Students will solve quadratic equations (factoring, quadratic formula and complete the square), perform operations with complex numbers, graph and solve quadratic inequalities, solve system of a linear and quadratic equation. **Polynomial Equations (Ch 5)** (18 days) Students will perform operations on polynomials, analyze and graph polynomial functions, evaluate polynomial functions and solve polynomial equations, find factors and zeros of polynomial functions, write an equation of a polynomial function given the roots. **Radical Equations (Ch 6)** (15 days) Students will find compositions and inverses of functions, simplify expressions and solve equations involving roots, radicals and rational exponents. RTI one day, one early release day
2nd Nine Weeks – 43 days (October 16th – December 20st) (November 25th – 29th – Thanksgiving Break) (December 23rd – January 3rd – Holiday Break)		**4th Nine Weeks – 45 days** (March 18th – May 21rd) (April 10th – Good Friday – No School) (April 24th – Battle of Flowers – No School) (May 25th – Memorial Day – No School)	
TEKS 3.A 3.B 3.C 3.D 3.E 3.F 3.G 4.A 4.B 4.D 4.H 7.A 8.A 8.B 8.C	**Graphing- Transformations (Ch 2.5)** (2 days) (Review and test) **Systems of Equations, Inequalities and Matrices (Ch 3)** (17 days) Students will solve systems of 2 and 3 linear equations, linear inequalities, solve problems by using linear programming, perform operations with matrices and determinants. Use Matrices of solve systems. **Quadratic Equations (Ch 4)** (20 days) Students will graph quadratic functions, solve quadratic equations (factoring, quadratic formula and complete the square), perform operations with complex numbers, graph and solve quadratic inequalities, solve system of a linear and quadratic equation. PSAT half day, one early release day, 2 review days, 4 days finals	**TEKS** 2.A 2.B 2.C 2.D 5.A 5.B 5.C 5.D 5.E 6.H 6.I 6.J 6.K 6.L 7.F 7.G 7.H 7.I 8.A 8.B C8.C	**Exponential & Logarithmic Equations (Ch 7)** (24 days) Students will define logarithms by exploring the relationship between exponential functions and their inverse, use prior knowledge of parent functions to investigate, describe and predict the effects of parameter changes on the graphs of exponential and logarithmic functions. They will also investigate logarithmic properties and apply these properties to solve exponential and logarithmic equations, and determine reasonableness off solutions. **Rational Equations (Ch 8)** (13 days) Students will identify the parent reciprocal function $f(x)=1/x$ and extend with parameter changes, describe asymptotic behaviors, intercepts and domain and range. Analyze direct vs indirect variations. Apply algebraic properties to simplify rational expressions, and determine solutions of rational equations and their reasonableness. RTI one day, 2 review day and 4 days for finals

Resources

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1st Nine Weeks	2nd Nine Weeks	3rd Nine Weeks	4th Nine Weeks