Algebra II

Curriculum Guide

To support strong classroom instruction, the TDOE has created instructional focus documents for mathematics. These documents were developed to target the mathematics standards where statewide data indicated students struggled the most and are optional supplements for educators to consider. The purpose of these documents is to provide teachers with examples of learning across all performance levels to help educators determine the depth of a student's conceptual understanding of the Tennessee mathematics standards. You may access these documents using the ***Best for All Central*** website*:*
https://bestforall.tnedu.gov/lessons-and-learning-item?content-id=7321

1st Quarter

Topic 1: Linear Functions and Systems

Standard(s)	Learning Objective(s)	Savvas Alignment	Assessments	Pacing
• A2.F.IF.A.1 • A2.F.IF.A.2 • A2.F.IF.B.4	• Identify key features of a graph of a function, including the intercepts, positive and negative intervals, and areas where the function is increasing or decreasing. • Calculate and interpret the average rate of change of a function over a specified interval. • Write the domain and range of functions using set-builder and interval notations.	1-1: Key Features of Functions (p. 5-12)	• Topic 1 Readiness Assessment • Standards Practice Week 1 • Lesson Quiz 1-1 • Assigned Practice Problems • 1-1 Reteach to Build Understanding • 1-1 Additional Practice • 1-1 Enrichment	2 days
• A2.F.BF.B.3	• Graph a transformed function by identifying the effect on the graph of replacing $f(x)$ by $f(x) + k$, $kf(x)$,	1-2: Transformations of Functions (p. 13-22)	• Standards Practice Week 1 • Lesson Quiz 1-2	2 days

	$f(kx)$, and $f(x+k)$ for specific values of k. • **Write an equation of a transformed function.** • **Relate the domain of a function to its graph and the real-world situation it describes.**		• **Assigned Practice Problems** • **1-2 Reteach to Build Understanding** • **1-2 Additional Practice** • **1-2 Enrichment**	
• **A2.F.BF.B.4**	• **Create and graph piecewise-defined functions, including absolute value functions and step functions.** • **Create and use a piecewise-defined function from real-world data.** • **Write a piecewise-defined rule from a graph.**	**1-3: Piecewise-Defined Functions** **(p. 23-30)**	• **Standards Practice Week 2** • **Lesson Quiz 1-3** • **Assigned Practice Problems** • **1-3 Reteach to Build Understanding** • **1-3 Additional Practice** • **1-3 Enrichment**	**2 days**
• **A2.F.BF.A.1** • **A2.F.BF.A.2**	• **Identify the common difference in an arithmetic sequence.** • **Write arithmetic sequences both recursively and with an explicit formula.** • **Construct arithmetic sequences given a graph, a description of a relationship, or two input-output pairs.**	**1-4: Arithmetic Sequences and Series** **(p. 31-39)**	• **Standards Practice Week 2** • **Lesson Quiz 1-4** • **Assigned Practice Problems** • **1-4 Reteach to Build Understanding** • **1-4 Additional Practice** • **1-4 Enrichment**	**1 day**
• **A2.A.CED.A.1**	• **Use graphs, tables, and graphing technology to find or approximate solutions to equations and inequalities.** • **Find approximate solutions to equations and inequalities by setting each expression equal to y and graphing.**	**1-5: Solving Equations and Inequalities by Graphing** **(p. 40-46)**	• **Standards Practice Week 2** • **Lesson Quiz 1-5** • **Assigned Practice Problems** • **1-5 Reteach to Build Understanding** • **1-5 Additional Practice**	**2 days**

			• 1-5 Enrichment	
• A2.A.REI.B.3	• Solve linear systems graphically and algebraically. • Identify regions that satisfy systems of inequalities.	1-6: Linear Systems (p. 47-54)	• Standards Practice Week 3 • Lesson Quiz 1-6 • Assigned Practice Problems • 1-6 Reteach to Build Understanding • 1-6 Additional Practice • 1-6 Enrichment	2 days
• A2.A.REI.B.3	• Represent a system of linear equations as a matrix and solve using row operations. • Rewrite a matrix in reduced row echelon form. • Represent constraints as a system of linear equations, use row operations on matrices to solve the system, and interpret the solution in terms of the original constraints.	1-7: Solving Linear Systems Using Matrices (p. 56-64)	• Standards Practice Week 3 • Lesson Quiz 1-7 • Assigned Practice Problems • 1-7 Reteach to Build Understanding • 1-7 Additional Practice • 1-7 Enrichment	2 days
Topic 1 Standards Above	Topic 1 Learning Objectives assessed above	Review and Topic 1 Assessment	• Topic Review (p. 65) • Topic 1 Assessment	2 days
Topic 2: Quadratic Functions and Equations				
Standard(s)	Learning Objective(s)	Savvas Alignment	Assessments	Pacing
• A2.F.BF.B.3 • A2.A.CED.A.2	• Create quadratic functions in vertex form to represent relationships between variables as shown in their graphs. • Graph functions on coordinate axes using their key features.	2-1: Vertex Form of a Quadratic Function (p. 73-79)	• Topic 2 Readiness Assessment • Standards Practice Week 4 • Lesson Quiz 2-1 • Assigned Practice Problems	2 days

	• **Interpret key features of a quadratic function.**		• **2-1 Reteach to Build Understanding** • **2-1 Additional Practice** • **2-1 Enrichment**	
• **A2.F.IF.A.1** • **A2.S.ID.B.4** • **A2.A.CED.A.2**	• **Create quadratic functions written in standard form.** • **Identify key features of quadratic functions and graph a quadratic function written in standard form.**	**2-2: Standard Form of a Quadratic Function** **(p. 80-87)**	• **Standards Practice Week 4** • **Lesson Quiz 2-2** • **Assigned Practice Problems** • **2-2 Reteach to Build Understanding** • **2-2 Additional Practice** • **2-2 Enrichment**	**2 days**
• **A2.A.APR.A.2** • **A2.F.IF.B.5.a**	• **Write a quadratic equation in factored form and use it to identify the zeros of the function it defines.** • **Determine the intervals over which a quadratic function is positive or negative.**	**2-3: Factored Form of a Quadratic Function** **(p. 88-94)**	• **Standards Practice Week 5** • **Lesson Quiz 2-3** • **Assigned Practice Problems** • **2-3 Reteach to Build Understanding** • **2-3 Additional Practice** • **2-3 Enrichment**	**2 days**
• **A2.A.REI.A.1**	• **Add, subtract, and multiply complex numbers using the properties of operations and the relation $i^2 = -1$.** • **Use complex numbers to represent numbers that are not on the real number line.**	**2-4: Complex Numbers and Operations** **(p. 95-101)**	• **Standards Practice Week 5** • **Lesson Quiz 2-4** • **Assigned Practice Problems** • **2-4 Reteach to Build Understanding** • **2-4 Additional Practice** • **2-4 Enrichment**	**2 days**

• **A2.A.REI.A.1**	• **Transform a quadratic equation into the form $(x-p)^2=q$ by completing the square.** • **Complete the square to reveal the minimum or maximum value of a quadratic expression.**	**2-5: Completing the Square** **(p. 103-109)**	• **Standards Practice Week 6** • **Lesson Quiz 2-5** • **Assigned Practice Problems** • **2-5 Reteach to Build Understanding** • **2-5 Additional Practice** • **2-5 Enrichment**	**2 days**
• **A2.A.REI.A.1**	• **Use the Quadratic Formula to solve quadratic equations that have complex solutions.**	**2-6: The Quadratic Formula** **(p. 110-116)**	• **Standards Practice Week 6** • **Lesson Quiz 2-6** • **Assigned Practice Problems** • **2-6 Reteach to Build Understanding** • **2-6 Additional Practice** • **2-6 Enrichment**	**2 days**
• **A2.A.REI.B.4**	• **Use algebra to solve a linear-quadratic system.** • **Solve a linear-quadratic system using graphing and explain why the points of intersection are the solutions.**	**2-7: Linear-Quadratic Systems** **(p. 117-123)**	• **Standards Practice Week 6** • **Lesson Quiz 2-7** • **Assigned Practice Problems** • **2-7 Reteach to Build Understanding** • **2-7 Additional Practice** • **2-7 Enrichment**	**2 days**
Topic 2 Standards Above	**Topic 2 Learning Objectives assessed above**	**Review and Topic 2 Assessment**	• **Topic Review (p. 124)** • **Topic 2 Assessment**	**2 days**

2nd Quarter				
Topic 3: Polynomial Functions				
Standard(s)	**Learning Objective(s)**	**Savvas Alignment**	**Assessments**	**Pacing**
• A2.F.IF.A.1 • A2.F.IF.B.4	• Graph polynomial functions and show the key features of the graph. • Predict the end behavior of polynomial functions by interpreting the leading coefficients and degrees. • Sketch graphs showing key features, given a verbal description.	3-1: Graphing Polynomial Functions (p. 131-138)	• Topic 3 Readiness Assessment • Standards Practice Week 7 • Lesson Quiz 3-1 • Assigned Practice Problems • 3-1 Reteach to Build Understanding • 3-1 Additional Practice • 3-1 Enrichment	2 days
• A2.F.IF.B.6.a • A2.F.BF.A.1	• Add, subtract, and multiply polynomials and understand that polynomials are closed under these operations. • Compare a polynomial function represented algebraically with one represented graphically.	3-2: Adding, Subtracting, and Multiplying Polynomials (p. 139-145)	• Standards Practice Week 7 • Lesson Quiz 3-2 • Assigned Practice Problems • 3-2 Reteach to Build Understanding • 3-2 Additional Practice • 3-2 Enrichment	2 days
• A2.A.APR.A.2	• Prove polynomial identities and use them to multiply and factor polynomials. • Expand binomials using the Binomial Theorem and coefficients determined by Pascal's Triangle.	3-3: Polynomial Identities (p. 146-153)	• Standards Practice Week 8 • Lesson Quiz 3-3 • Assigned Practice Problems • 3-3 Reteach to Build Understanding	2 days

			• 3-3 Additional Practice • 3-3 Enrichment	
• A2.A.APR.A.1	• Divide polynomial expressions using long division. • Use synthetic division to rewrite rational exponents.	3-4: Dividing Polynomials (p. 154-161)	• Standards Practice Week 8 • Lesson Quiz 3-4 • Assigned Practice Problems • 3-4 Reteach to Build Understanding • 3-4 Additional Practice • 3-4 Enrichment	2 days
• A2.A.APR.A.2 • A2.F.IF.B.4	• Identify the zeros of a function by factoring or using synthetic division. • Use the zeros of a polynomial function to sketch its graph.	3-5: Zeros of Polynomial Functions (p. 162-169)	• Standards Practice Week 9 • Lesson Quiz 3-5 • Assigned Practice Problems • 3-5 Reteach to Build Understanding • 3-5 Additional Practice • 3-5 Enrichment	2 days
• A2.A.APR.A.1 • A2.A.APR.A.2	• Extend polynomial theorems and identities to find the real and complex solutions of polynomial equations. • Write polynomial functions using conjugates.	3-6: Theorems About Roots of Polynomial Equations (p. 171-178)	• Standards Practice Week 9 • Lesson Quiz 3-6 • Assigned Practice Problems • 3-6 Reteach to Build Understanding • 3-6 Additional Practice • 3-6 Enrichment	2 days
• A2.N.Q.A.1.b • A2.F.BF.B.3	• Recognize even and odd functions from their graphs and algebraic equations.	3-7: Transformations of Polynomial Functions	• Standards Practice Week 9 • Lesson Quiz 3-7	2 days

	• **Identify the effect on the graphs of cubic and quartic functions of replacing $f(x)$ by $f(x)+k$, $kf(x)$, $f(kx)$, and $f(x+k)$.**	**(p. 171-178)**	• **Assigned Practice Problems** • **3-7 Reteach to Build Understanding** • **3-7 Additional Practice** • **3-7 Enrichment**	
Topic 3 Standards Above	**Topic 3 Learning Objectives assessed above**	**Review and Topic 3 Assessment**	• **Topic Review (p. 187)** • **Topic 3 Assessment**	**2 days**
Topic 5: Rational Exponents and Radical Functions				
Standard(s)	**Learning Objective(s)**	**Savvas Alignment**	**Assessments**	**Pacing**
• **A2.N.RN.A.1.a** • **A2.N.RN.A.1.b** • **A2.N.RN.A.1.c**	• **Find all real nth roots of a number.** • **Evaluate expressions with rational exponents.** • **Use nth roots to solve equations by rewriting expressions using the properties of exponents.**	**5-1: nth Roots, Radicals, and Rational Exponents** **(p. 239-246)**	• **Topic 5 Readiness Assessment** • **Standards Practice Week 12** • **Lesson Quiz 5-1** • **Assigned Practice Problems** • **5-1 Reteach to Build Understanding** • **5-1 Additional Practice** • **5-1 Enrichment**	**2 days**
• **A2.N.RN.A.1.c**	• **Use the properties of exponents and radicals to identify ways to rewrite radical expressions.** • **Interpret radical expressions that represent a quantity in terms of its context.**	**5-2: Properties of Exponents and Radicals** **(p. 247-254)**	• **Standards Practice Week 12** • **Lesson Quiz 5-2** • **Assigned Practice Problems** • **5-2 Reteach to Build Understanding**	**2 days**

			• 5-2 Additional Practice • 5-2 Enrichment	
• A2.F.IF.A.1 • A2.F.IF.B.4 • A2.F.BF.B.3	• Graph radical functions, including square root and cube root functions. • Identify the effect of transformations on the key features of the graphs of radical functions.	5-3: Graphing Radical Functions (p. 255-262)	• Standards Practice Week 13 • Lesson Quiz 5-3 • Assigned Practice Problems • 5-3 Reteach to Build Understanding • 5-3 Additional Practice • 5-3 Enrichment	2 days
• A2.A.REI.A.1 A2.A.REI.A.2 • A2.A.CED.A.3	• Solve radical equations in one variable. • Explain how extraneous solutions may arise when solving radical equations. • Solve radical inequalities and apply the solution within a real-world context.	5-4: Solving Radical Equations (p. 263-271)	• Standards Practice Week 13 • Lesson Quiz 5-4 • Assigned Practice Problems • 5-4 Reteach to Build Understanding • 5-4 Additional Practice • 5-4 Enrichment	2 days
• A2.F.BF.A.1.a • A2.F.BF.A.1.b	• Combine functions by addition, subtraction, multiplication, or division, and identify the domain of the result. • Compose functions, specifying the order in which the functions are applied and describing the domain of the composite function.	5-5: Function Operations (p. 273-280)	• Standards Practice Week 14 • Lesson Quiz 5-5 • Assigned Practice Problems • 5-5 Reteach to Build Understanding • 5-5 Additional Practice • 5-5 Enrichment	2 days
• A2.F.BF.B.4.a • A2.F.BF.B.4.b • A2.F.BF.B.4.c	• Use tables, graphs, and equations to represent the inverse of a relation.	5-6: Inverse Relations and Functions	• Standards Practice Week 14 • Lesson Quiz 5-6	2 days

	• Write an equation for the inverse of a function by restricting the domain. • Verify that one function is the inverse of another, using composition.	(p. 281-289)	• Assigned Practice Problems • 5-6 Reteach to Build Understanding • 5-6 Additional Practice • 5-6 Enrichment	
Topic 5 Standards Above	Topic 5 Learning Objectives assessed above	Review and Topic 5 Assessment	• Topic Review (p. 290) • Topic 5 Assessment	2 days
Review and Semester 1 Exams				5 days

3rd Quarter

Topic 6: Exponential and Logarithmic Functions

Standard(s)	Learning Objective(s)	Savvas Alignment	Assessments	Pacing
• A2.F.IF.A.2, A2.F.IF.B.4 • A2.F.IF.B.6.a • A2.F.BF.B.3	• Interpret key features of exponential functions represented by graphs, tables, and equations. • Graph transformations of exponential functions showing intercepts and end behavior.	6-1: Key Features of Exponential Functions (p. 297-304)	• Topic 6 Readiness Assessment • Standards Practice Week 15 • Lesson Quiz 6-1 • Assigned Practice Problems • 6-1 Reteach to Build Understanding • 6-1 Additional Practice • 6-1 Enrichment	2 days
• A2.A.SSE.A.1.a • A2.A.SSE.A.1.b • A2.F.IF.B.5 • A2.F.IF.B.5.b	• Rewrite exponential functions to identify rates.	6-2: Exponential Models (p. 305-312)	• Standards Practice Week 15 • Lesson Quiz 6-2 • Assigned Practice Problems	2 days

• A2.S.ID.B.4 • A2.N.Q.A.1.d	• Interpret the parameters of an exponential function within the context of compound interest problems. • Construct exponential models given two points or by using regression.		• 6-2 Reteach to Build Understanding • 6-2 Additional Practice • 6-2 Enrichment	
• A2.F.BF.B.4.b • A2.F.LE.A.1.b • A2.F.LE.A.1.c	• Understand the inverse relationship between exponents and logarithms. • Use logarithms to solve exponential models. • Evaluate logarithms using technology.	6-3: Logarithms (p. 314-320)	• Standards Practice Week 16 • Lesson Quiz 6-3 • Assigned Practice Problems • 6-3 Reteach to Build Understanding • 6-3 Additional Practice • 6-3 Enrichment	2 days
• A2.F.IF.A.2 • A2.F.IF.B.4 • A2.F.IF.B.6.a • A2.F.BF.B.3 • A2.F.BF.B.4.b	• Graph logarithmic functions and interpret their key features. • Write and interpret the inverses of exponential and logarithmic functions.	6-4: Logarithmic Functions (p. 321-326)	• Standards Practice Week 16 • Lesson Quiz 6-4 • Assigned Practice Problems • 6-4 Reteach to Build Understanding • 6-4 Additional Practice • 6-4 Enrichment	2 days
• A2.F.LE.A.1.b	• Use Properties of Logarithms to rewrite logarithmic expressions. • Use the Change of Base Formula to evaluate logarithmic expressions and solve equations.	6-5: Properties of Logarithms (p. 327-332)	• Standards Practice Week 16 • Lesson Quiz 6-5 • Assigned Practice Problems • 6-5 Reteach to Build Understanding • 6-5 Additional Practice • 6-5 Enrichment	2 days

• A2.A.CED.A.1 • A2.A.REI.A.1 • A2.F.LE.A.1.a • A2.N.Q.A.1.d	• Use logarithms to express the solutions to exponential models. • Solve exponential and logarithmic equations.	6-6: Exponential and Logarithmic Equations (p. 333-339)	• Standards Practice Week 17 • Lesson Quiz 6-6 • Assigned Practice Problems • 6-6 Reteach to Build Understanding • 6-6 Additional Practice • 6-6 Enrichment	2 days
• A2.F.BF.A.1 • A2.F.BF.A.2	• Construct a geometric sequence given a graph, table, or description of a relationship. • Translate between geometric sequences written in recursive and explicit forms.	6-7: Geometric Sequences and Series (p. 340-348)	• Standards Practice Week 17 • Lesson Quiz 6-7 • Assigned Practice Problems • 6-7 Reteach to Build Understanding • 6-7 Additional Practice • 6-7 Enrichment	2 days
• A2.F.IF.B.6.b • A2.F.LE.A.2	• Compare the properties of a function over two intervals. • Compare the growth of linear, quadratic, exponential, and cubic functions.	TN-2: Comparing Properties of Functions (p. TN5-TN8)	• Standards Practice Week 17 • Lesson Quiz TN-2 • Assigned Practice Problems	1 day
Topic 6 Standards Above	Topic 6 Learning Objectives assessed above	Review and Topic 6 Assessment	• Topic Review (p. 349) • Topic 6 Assessment	2 days

Topic 10: Matrices

Standard(s)	Learning Objective(s)	Savvas Alignment	Assessments	Pacing
• A2.N.M.A.1 • A2.N.M.A.2.a	• Use a matrix to represent data.	10-1: Operations with Matrices (p. 503-510)	• Topic 10 Readiness Assessment	2 days

• **A2.N.M.A.2.b**	• **Apply scalar multiplication to produce a new matrix.** • **Add and subtract matrices by adding and subtracting the corresponding elements.** • **Translate and dilate figures using matrices.**		• **Standards Practice Week 25** • **Lesson Quiz 10-1** • **Assigned Practice Problems** • **10-1 Reteach to Build Understanding** • **10-1 Additional Practice** • **10-1 Enrichment**	
• **A2.N.M.A.2.c** • **A2.N.M.A.2.d**	• **Multiply two matrices when the number of columns in the first matrix is equal to the number of rows in the second matrix.** • **Understand the identity matrix and recognize that it is similar to the role of 1 in multiplication of real numbers.**	**10-2: Matrix Multiplication** **(p. 511-517)**	• **Standards Practice Week 25** • **Lesson Quiz 10-2** • **Assigned Practice Problems** • **10-2 Reteach to Build Understanding** • **10-2 Additional Practice** • **10-2 Enrichment**	**2 days**
• **A2.N.M.A.2.d**	• **Determine whether a matrix has an inverse and if it does, find it.** • **Use the absolute value of the determinant of a matrix to find the areas of triangles and parallelograms.**	**10-4: Determinants** **(p. 528-536)**	• **Standards Practice Week 26** • **Lesson Quiz 10-4** • **Assigned Practice Problems** • **10-4 Reteach to Build Understanding** • **10-4 Additional Practice** • **10-4 Enrichment**	**2 days**
• **A2.N.M.A.2.d** • **A2.N.M.A.2**	• **Represent a system of equations, in two or three variables, as a single matrix equation.** • **Find the inverse of a matrix and use it to solve a system of linear equations.**	**10-5: Inverse Matrices and Systems of Equations** **(p. 537-543)**	• **Standards Practice Week 26** • **Lesson Quiz 10-5** • **Assigned Practice Problems**	**2 days**

			• 10-5 Reteach to Build Understanding • 10-5 Additional Practice • 10-5 Enrichment	
Topic 10 Standards Above	Topic 10 Learning Objectives assessed above	Review and Topic 10 Assessment	• Topic Review (p. 545) • Topic 10 Assessment	2 days
Topic 11: Data Analysis and Statistics				
Standard(s)	**Learning Objective(s)**	**Savvas Alignment**	**Assessments**	**Pacing**
• A2.N.Q.A.1.c	• Define and recognize a statistical question. • Define and identify the type of statistical variable that is represented by a question or the data represented on a graph. • Distinguish between quantities such as population/sample and parameter/statistic for the purpose of descriptive modeling.	11-1: Statistical Questions and Variables (p. 551-557)	• Topic 11 Readiness Assessment • Standards Practice Week 27 • Lesson Quiz 11-1 • Assigned Practice Problems • 11-1 Reteach to Build Understanding • 11-1 Additional Practice • 11-1 Enrichment	2 days
• A2.S.IC.A.1 • A2.S.IC.A.2	• Identify experiments, sample surveys, and observational studies. • Recognize bias in sampling methods. • Identify a sampling method that provides a random sample from a population.	11-2: Statistical Studies and Sampling Methods (p. 558-564)	• Standards Practice Week 27 • Lesson Quiz 11-2 • Assigned Practice Problems • 11-2 Reteach to Build Understanding • 11-2 Additional Practice	2 days

			• **11-2 Enrichment**	
• **A2.S.ID.A.1** • **A2.S.ID.A.2** • **A2.N.Q.A.1.a**	• **Find measures of center and spread, such as median, mean, interquartile range, and standard deviation.** • **Compare data sets using statistical measures that are appropriate for the distribution of data.**	**11-3: Data Distributions** **(p. 565-572)**	• **Standards Practice Week 27** • **Lesson Quiz 11-3** • **Assigned Practice Problems** • **11-3 Reteach to Build Understanding** • **11-3 Additional Practice** • **11-3 Enrichment**	**2 days**
• **A2.S.ID.A.2** • **A2.S.ID.A.3**	• **Fit a normal distribution to data.** • **Compare and evaluate data values using z-scores.** • **Use technology to calculate the area under the standard normal distribution curve.**	**11-4: Normal Distributions** **(p. 573-580)**	• **Standards Practice Week 28** • **Lesson Quiz 11-4** • **Assigned Practice Problems** • **11-4 Reteach to Build Understanding** • **11-4 Additional Practice** • **11-4 Enrichment**	**2 days**
• **A2.S.IC.A.3**	• **Evaluate reports by estimating population parameters.** • **Use multiple samples to make an inference about a population.** • **Calculate the margin of error for quantitative or categorical data.**	**11-5: Margin of Error** **(p. 581-588)**	• **Standards Practice Week 28** • **Lesson Quiz 11-5** • **Assigned Practice Problems** • **11-5 Reteach to Build Understanding** • **11-5 Additional Practice** • **11-5 Enrichment**	**2 days**
• **A2.S.IC.A.3**	• **Formulate two hypotheses for a statistical question and test using statistics to draw a conclusion.**	**11-6: Introduction to Hypothesis Testing** **(p. 589-596)**	• **Standards Practice Week 28** • **Lesson Quiz 11-6**	**2 days**

	• Use graphs and simulation to determine whether differences between parameters are significant. • Use data from a randomized experiment to evaluate a report.		• Assigned Practice Problems • 11-6 Reteach to Build Understanding • 11-6 Additional Practice • 11-6 Enrichment	
Topic 11 Standards Above	Topic 11 Learning Objectives assessed above	Review and Topic 11 Assessment	• Topic Review (p. 598) • Topic 11 Assessment	2 days

4th Quarter

Topic 12: Probability

Standard(s)	Learning Objective(s)	Savvas Alignment	Assessments	Pacing
• A2.S.CP.A.1	• Explain independence of events in everyday language and everyday situations. • Determine the probability of the union of two events (A or B) and the intersection of two independent events (A and B).	12-1: Probability Events (p. 605-612)	• Topic 12 Readiness Assessment • Standards Practice Week 29 • Lesson Quiz 12-1 • Assigned Practice Problems • 12-1 Reteach to Build Understanding • 12-1 Additional Practice • 12-1 Enrichment	2 days
• A2.S.CP.A.1 • A2.S.CP.C.4	• Understand the conditional probability of A given B as the fraction of outcomes in B that also belong to A. • Interpret independence of events in terms of conditional probability.	12-2: Conditional Probability (p. 613-620)	• Standards Practice Week 29 • Lesson Quiz 12-2 • Assigned Practice Problems	2 days

	• Use a two-way frequency table to decide if events are independent and to approximate conditional probabilities.		• 12-2 Reteach to Build Understanding • 12-2 Additional Practice • 12-2 Enrichment	
• A2.S.CP.B.2.a • A2.S.CP.B.2.b	• Calculate the number of permutations and combinations in mathematical and real-world contexts. • Use permutations and combinations to compute probabilities of compound events and solve problems.	12-3: Permutations and Combinations (p. 621-627)	• Standards Practice Week 30 • Lesson Quiz 12-3 • Assigned Practice Problems • 12-3 Reteach to Build Understanding • 12-3 Additional Practice • 12-3 Enrichment	2 days
• A2.S.CP.B.2.b	• Develop a probability distribution based on theoretical probabilities or empirical data. • Graph probability distributions. • Calculate probability in binomial experiments.	12-4: Probability Distributions (p. 628-635)	• Standards Practice Week 30 • Lesson Quiz 12-4 • Assigned Practice Problems • 12-4 Reteach to Build Understanding • 12-4 Additional Practice • 12-4 Enrichment	2 days
• A2.S.CP.B.3	• Use the Law of Large Numbers to analyze statistical claims about chance events.	TN-3: The Law of Large Numbers (p. TN9 – TN11)	• Standards Practice Week 30 • Lesson Quiz TN-3 • Assigned Practice Problems	1 day
Topic 12 Standards Above	Topic 12 Learning Objectives assessed above	Review and Topic 12 Assessment	• Topic Review (p. 650) • Topic 12 Assessment	2 days

EOC Review				
Standard(s)	**Learning Objective(s)**	**Savvas Alignment**	**Assessments**	**Pacing**
TN Ready Standards for Algebra II	Major Focus Standards of TN Ready	EOC Review Resources for Savvas 1. Tennessee Standards Practice Workbook. 2. Envision Student Companion 3. Envision Assessment Readiness Workbook Additional Resources 4. TNReady Review 5. TNReady Item Releases 6. TNReady Practice Tests	• TN Ready Practice Tests (Livebinder) • Practice Assessments in the Assessment Readiness Workbook • Practice problems in the Standards Practice Workbook	15 days
Topic 7: Trigonometric Functions (Pre-Calculus Intro)				
Standard(s)	**Learning Objective(s)**	**Savvas Alignment**	**Assessments**	**Pacing**
• G.SRT.C.4.a • G.SRT.C.5.a	• Use special triangles to derermine trigonometric ratios geometrically. • Use trigonometric function and the Pythagorean Theorem to find missing side lengths. • Identify and explain trigonometric identities.	7-1: Trigonometric Functions and Acute Angles (p. 357-364)	• Topic 7 Readiness Assessment • Standards Practice Week 18 • Lesson Quiz 7-1 • Assigned Practice Problems • 7-1 Reteach to Build Understanding • 7-1 Additional Practice • 7-1 Enrichment	2 days
• G.SRT.C.4	• Find the measures of an angle in standard position and its reference angle. • Use radian measure on the unit circle to find arc length. • Convert between degrees and radians.	7-2: Angles and the Unit Circle (p. 365-374)	• Standards Practice Week 18 • Lesson Quiz 7-2 • Assigned Practice Problems	2 days

			• 7-2 Reteach to Build Understanding • 7-2 Additional Practice • 7-2 Enrichment	
• G.SRT.C.4	• Use reference angles and triangles to evaluate trigonometric function and their reciprocal functions. • Use the Pythagorean identity to find the sine, cosine, and quadrant of an angle.	7-3: Trigonometric Functions and Real Numbers (p. 375-382)	• Standards Practice Week 19 • Lesson Quiz 7-3 • Assigned Practice Problems • 7-3 Reteach to Build Understanding • 7-3 Additional Practice • 7-3 Enrichment	2 days
• A2.F.IF.A.1 • A2.F.IF.A.2 • A2.F.IF.B.6.a • A2.F.BF.B.3	• Graph and identify the key features of sine and sosine functions. • Find and interpret the average rate of change of a periodic function over a specified interval. • Compare key feautes of different periodic functions.	7-4: Graphing Sine and Cosine Functions (p. 383-391)	• Standards Practice Week 19 • Lesson Quiz 7-4 • Assigned Practice Problems • 7-4 Reteach to Build Understanding • 7-4 Additional Practice • 7-4 Enrichment	2 days
• A2.F.BF.B.3	• Describe and compare key features of the graph of trigonometric functions. • Graph functions of the form $f(x) = a\ tan\ bx$ and relate the graph of a function to the graph of the parent function.	7-5: Graphing Other Trigonometric Functions (p. 393-399)	• Standards Practice Week 20 • Lesson Quiz 7-5 • Assigned Practice Problems • 7-5 Reteach to Build Understanding • 7-5 Additional Practice • 7-5 Enrichment	2 days

• **A2.F.IF.A.1** • **A2.F.BF.B.3**	• **Identify how changing the parameters of the sine or cosine function affects the graph of the function.** • **Use trigonometric functions to model situations with specified amplitude, frequency, and midline.**	**7-6: Translating Trigonometric Functions** **(p. 400-407)**	• **Standards Practice Week 20** • **Lesson Quiz 7-6** • **Assigned Practice Problems** • **7-6 Reteach to Build Understanding** • **7-6 Additional Practice** • **7-6 Enrichment**	**2 days**
Topic 7 Standards Above	**Topic 7 Learning Objectives assessed above**	**Review and Topic 7 Assessment**	• **Topic Review (p. 408)** • **Topic 7 Assessment**	**2 days**
Review and Semester 2 Exams				**5 days**