

## Pacing Guide for 7-12 Curriculum

Course Title: Algebra II with Trig.

Length of Course: 1<sup>st</sup> Semester

Week	Chapter & Lesson	COS	Objectives
Week 1	Welcome and Diagnostic Test Lesson 1 Lesson 2 Lesson 3 (2 days)	Lesson 3: #26 [F-IF8]	*To classify and use properties of real numbers. *To evaluate expressions and to combine like terms. *Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function. [F-IF8] *To use the rules of exponents.
Week 2	Lab 1 Lesson 4 Lab 2 Lesson 5 Lesson 6	Lesson 4: #23 [F-IF1] #28 [F-IF5]	* To identify functions and use function notation. *Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes.* [F-IF5] * Write a function that describes a relationship between two quantities.* [F-BF1] *To use matrices to organize data and to solve problems. *To calculate percent of change.
Week 3 (4 days)	Lesson 7 Lesson 8 Lesson 9 Lesson 10	Lesson 8: #17 [A-CED2] Lesson 10: #16 [A-CED1]	*To solve linear equations. *To write and use direct variation equations. *To multiply matrices. *To solve and graph inequalities. * Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales. [A-CED2] *Create equations and inequalities in one variable and use them to solve problems. <i>Include equations arising from linear and quadratic functions, and simple rational and exponential functions.</i> [A-CED1]

Week 4	Review Test 1 Performance Task 1 Lesson 11 Lesson 12	Lesson 11: #9 [A-APR1] Lesson 12: #17 [A-CED2]	<ul style="list-style-type: none"> <li>*To use Logic and Truth tables.</li> <li>* To classify, add, and subtract polynomials.</li> <li>* To solve inverse variation problems. .</li> <li>* Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales. [A-CED2]</li> </ul>
Week 5.	Lab 3 Lesson 13 Lesson 14 Lesson 15 Review	Lab 3: #22 [F-IF4] #25 [F-IF7] Lesson 13: #24 [F-IF6] Lesson 15: #21 [A-REI11]	<ul style="list-style-type: none"> <li>*To graph linear equations.</li> <li>* To find determinants.</li> <li>*To solve systems of equations by graphing.</li> <li>*For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. <i>Key features include intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity.*</i> [F-IF4]</li> <li>*Graph functions expressed symbolically, and show key features of the graph, by hand in simple cases and using technology for more complicated cases. *[F-IF7]</li> <li>*Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph.* [F-IF6]</li> <li>*Explain why the <math>x</math>-coordinates of the points where the graphs of the equations <math>y = f(x)</math> and <math>y = g(x)</math> intersect are the solutions of the equation <math>f(x) = g(x)</math>; find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where <math>f(x)</math> and/or <math>g(x)</math> are linear, polynomial, rational, absolute value, exponential, and logarithmic functions.* [A-REI11]</li> </ul>

Week 6	Test 2 Performance Task 2 Lesson 16 Lab 4 Lesson 17	Lesson 17: # 25 [F-IF7b] #29 [F-BF3]	<ul style="list-style-type: none"> <li>*To solve systems of equations using Cramer's Rule.</li> <li>*To change the line and window of a graph</li> <li>*To solve absolute value equations and inequalities.</li> <li>* Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions. [F-IF7b]</li> <li>* Identify the effect on the graph of replacing <math>f(x)</math> by <math>f(x) + k</math>, <math>k f(x)</math>, <math>f(kx)</math>, and <math>f(x + k)</math> for specific values of <math>k</math> (both positive and negative); find the value of <math>k</math> given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. Include recognizing even and odd functions from their graphs and algebraic expressions for them. [F-BF3]</li> </ul>
Week 7	Lesson 18 Lesson 19 Lesson 20 Review Test 3	Lesson 19: #7 [A-SSE2] Lesson 20: #28 [F-IF4] [F-BF1b]	<ul style="list-style-type: none"> <li>*To calculate with units of measure.</li> <li>*To multiply polynomials.</li> <li>*To add, subtract, multiply, and divide functions.</li> <li>* Use the structure of an expression to identify ways to rewrite it. [A-SSE2]</li> <li>* Write a function that describes a relationship between two quantities.* [F-BF1]</li> <li>* Combine standard function types using arithmetic operations. [F-BF1b]</li> </ul>

Week 8 (3 days)	Performance Task 3 Investigation 2 Lesson 21		*Be able to solve parametric equations. *To solve systems of equations using the substitution method
Week 9 (4 days)	Lab 5 Lesson 22 Lesson 23 Lesson 24	Lesson 22: #22 [F-IF4] #25 [F-IF7]	*Be able to store and plot lists of data in a graphing calculator *To analyze continuous, discontinuous, and discrete functions. *To factor polynomials. *To solve systems of equations using Elimination. * Explain why the $x$ -coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$ ; find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where $f(x)$ and/or $g(x)$ are linear, polynomial, rational, absolute value, exponential, and logarithmic functions.* [A-REI11] * Graph functions expressed symbolically, and show key features of the graph, by hand in simple cases and using technology for more complicated cases.*
Week 10	Lab 6 Lesson 25 Review Test 4 Performance Task 4	Lesson 25: #37 [S-ID4]	*To find measures of central tendency and dispersion. *Be able to calculate 1 and 2-variable statistical data * Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages. Recognize that there are data sets for which such a procedure is not appropriate. Use calculators, spreadsheets, and tables to estimate areas under the normal curve. [S-ID4]
Week 11	Lesson 26 Lesson 27 Lesson 28 Lesson 29 Lesson 30	Lesson 26: #16 [A-CED1] Lesson 27: #6 [A-SSE1] [A-SSE1a] #25 [F-IF7] #26 [F-IF8] #27 [F-IF9]  Lesson 28: #6 { A-SSE1} #14 [A-APR6] #15 [A-APR7]	*To write the equation of a line. *To analyze the graph of a quadratic function. * To simplify rational expressions. *To solve systems of equations in 3 variables.  *To apply transformations to the parabola and to find the min and max. * Create equations and inequalities in one variable and

	<p>Lesson 30: #22 [F-IF4] #29 [F-BF3] #25 [F-IF7]</p>	<p>use them to solve problems. <i>Include equations arising from linear and quadratic functions, and simple rational and exponential functions.</i> [A-CED1]</p> <ul style="list-style-type: none"> <li>* Interpret expressions that represent a quantity in terms of its context.* [A-SSE1]</li> <li>* Interpret parts of an expression such as terms, factors, and coefficients. [A-SSE1a]</li> <li>* Graph functions expressed symbolically, and show key features of the graph, by hand in simple cases and using technology for more complicated cases.* [F-IF7]</li> <li>* Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function. [F-IF8]</li> <li>* Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). [F-IF9]</li> <li>* Rewrite simple rational expressions in different forms; write <math>a(x)/b(x)</math> in the form <math>q(x) + r(x)/b(x)</math>, where <math>a(x)</math>, <math>b(x)</math>, <math>q(x)</math>, and <math>r(x)</math> are polynomials with the degree of <math>r(x)</math> less than the degree of <math>b(x)</math>, using inspection, long division, or for the more complicated examples, a computer algebra system. [A-APR6]</li> <li>* (+) Understand that rational expressions form a system analogous to the rational numbers, closed under addition, subtraction, multiplication, and division by a nonzero rational expression; add, subtract, multiply, and divide rational expressions. [A-APR7]</li> <li>* For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal</li> </ul> <p>description of the relationship. <i>Key features include intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity.*</i> [F-IF4]</p> <ul style="list-style-type: none"> <li>* Identify the effect on the graph of replacing <math>f(x)</math> by <math>f(x) + k</math>, <math>k f(x)</math>, <math>f(kx)</math>, and <math>f(x + k)</math> for specific values of <math>k</math> (both</li> </ul>
--	---	---

			positive and negative); find the value of $k$ given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. Include recognizing even and odd functions from their graphs and algebraic expressions for them. [F-BF3]
Week 12	Review Test 5 Performance Task 5 Investigation 3 Lesson 31	Lesson 31: #14 [A-APR6]	*To multiply and divide rational expressions. *Be able to graph three linear equations in three variables *Rewrite simple rational expressions in different forms; write $a(x)/b(x)$ in the form $q(x) + r(x)/b(x)$ , where $a(x)$ , $b(x)$ , $q(x)$ , and $r(x)$ are polynomials with the degree of $r(x)$ less than the degree of $b(x)$ , using inspection, long division, or for the more complicated examples, a computer algebra system. [A-APR6]
Week 13 (4 days)	Lesson 32 Lesson 33 Lesson 34 Lesson 35	Lesson 35: #7 [F-BF3] #11 [A-APR3] #22 [F-IF4] #25 [F-IF7]	*To solve systems with Matrix inverses. * To apply counting principles. *To graph linear equations. *To solve quadratic equations. * Use the structure of an expression to identify ways to rewrite it. [A-SSE2] * Identify zeros of polynomials when suitable factorizations are available, and use the zeros to construct a rough graph of the function defined by the polynomial. [A-APR3] * For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. <i>Key features include intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity.</i> * [F-IF4] * Graph functions expressed symbolically, and show key features of the graph, by hand in simple cases and using technology for more complicated cases.* [F-IF7]

Week 14 (2 days)	Review Test 6 Performance Task 6 (HW)		
Week 15	Lessons 36 Lesson 37 Lesson 38 Lesson 39 Lesson 40	Lesson 38: #14 [A-APR6]	<ul style="list-style-type: none"> <li>*To write equations for parallel and perpendicular lines.</li> <li>*To add and subtract rational expressions.</li> <li>*To divide polynomials using long division.</li> <li>*To graph linear inequalities in two variables.</li> <li>* To simplify radical expressions.</li> <li>* Rewrite simple rational expressions in different forms; write <math>a(x)/b(x)</math> in the form <math>q(x) + r(x)/b(x)</math>, where <math>a(x)</math>, <math>b(x)</math>, <math>q(x)</math>, and <math>r(x)</math> are polynomials with the degree of <math>r(x)</math> less than the degree of <math>b(x)</math>, using inspection, long division, or for the more complicated examples, a computer algebra system. [A-APR6]</li> </ul>
Week 16	Review Test 7 Performance Task 7 (HW) Investigation 4 Lesson 41 Lab 7		<ul style="list-style-type: none"> <li>*Understanding Cryptography.</li> <li>*To use the Pythagorean theorem and the distance formula to solve problems.</li> <li>*To find permutations and combinations.</li> </ul>
Week 17	Lesson 42 Lesson 43 Lesson 44 Lab 8 Lesson 45	Lab 8: #29 [F-BF3] Lesson 45: #37 [S-ID4]	<ul style="list-style-type: none"> <li>*To solve systems of linear inequalities.</li> <li>*To use techniques of rationalizing denominators.</li> <li>*To apply linear and median regression.</li> <li>*To find the line of best fit.</li> <li>*Identify the effect on the graph of replacing <math>f(x)</math> by <math>f(x) + k</math>, <math>k f(x)</math>, <math>f(kx)</math>, and <math>f(x + k)</math> for specific values of <math>k</math> (both positive and negative); find the value of <math>k</math> given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. Include recognizing even and odd functions from their graphs and algebraic expressions for them. [F-BF3]</li> <li>*(+) Analyze decisions and strategies using probability concepts (e.g., product testing, medical testing, pulling a hockey goalie at the end of a game). [S-MD7]</li> </ul>

Week 18 (3 days)	Review Exam (Test 8)		
Week 19. (2 days)	Performance Task 8 Lesson 46	Lesson 46: #34 Alabama	*To find trig. functions and their reciprocals. * Define the six trigonometric functions using ratios of the sides of a right triangle, coordinates on the unit circle, and the reciprocal of other functions. (Alabama)
Week 20 (4 days)	Lesson 47 Lesson 48 On Core Lesson 3-6 Lesson 49	Lesson 47: #25 {F-IF7e} #29 [F-BF3]	*To graph exponential functions. *To simplify complex fractions. *To use the binomial theorem. * Graph exponential and logarithmic functions, showing intercepts and end behavior, and trigonometric functions, showing period, midline, and amplitude. [F-IF7e] * Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$ , $k f(x)$ , $f(kx)$ , and $f(x + k)$ for specific values of $k$ (both positive and negative); find the value of $k$ given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. Include recognizing even and odd functions from their graphs and algebraic expressions for them. [F-BF3]
Week 21	Lesson 50 Review Test 9 Performance Task 9 Investigation 5	Lesson 50: #30 [F-BF4a]	*Be able to find the inverse of a relation and function. *Be able to find the binomial distribution. * Solve an equation of the form $f(x) = c$ for a simple function $f$ that has an inverse, and write an expression for the inverse. [F-BF4a]

Week 22 (4 days)	Lesson 51 Lab 9 Lesson 52 Lesson 53	Lesson 51: #10 [A-APR2]	<ul style="list-style-type: none"> <li>*Be able to use synthetic division.</li> <li>*Be able to use the trigonometry keys and adjust to a trigonometric window in a graphing calculator.</li> <li>*Be able to use special right triangles to solve for missing sides.</li> <li>*Be able to perform compositions of functions.</li> <li>* Know and apply the Remainder Theorem: For a polynomial <math>p(x)</math> and a number <math>a</math>, the remainder on division by <math>x - a</math> is <math>p(a)</math>, so <math>p(a) = 0</math> if and only if <math>(x - a)</math> is a factor of <math>p(x)</math>. [A-APR2]</li> </ul>
Week 23	Lesson 54 Lesson 55 Review Test 10 Performance Task 10	Lesson 54: #18 [A-CED3] #22 [F-IF4] Lesson 55: #44 [S-MD6]	<ul style="list-style-type: none"> <li>*Be able to use linear programming.</li> <li>*Be able to find the probability of events.</li> <li>* Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context. [A-CED3]</li> <li>* For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. <i>Key features include intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity.</i>* [F-IF4]</li> <li>* (+) Use probabilities to make fair decisions (e.g., drawing by lots, using a random number generator). [S-MD6]</li> </ul>

Week 24	Lesson 56 Lesson 57 Lesson 58 Lesson 59 Lesson 60	Lesson 58: #7 [A-SSE2] Lesson 59: #26 [F-IF8]	<ul style="list-style-type: none"> <li>*Be able to find angles of rotation.</li> <li>*Be able to find exponential growth and decay.</li> <li>*Be able to complete the square.</li> <li>*Be able to use fractional exponents.</li> <li>*Be able to distinguish between mutually exclusive and independent events.</li> <li>* Use the structure of an expression to identify ways to rewrite it. [A-SSE2]</li> <li>* Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function. [F-IF8]</li> </ul> <p>To solve radical expressions. To use the Law of Sines. To use the properties of logarithms. To identify populations and different types of sampling. To find the discriminant. To graph radical functions. To use factoring and graphing to find the roots of a polynomial. To use the Law of Cosines. To solve quadratic eqns. To understand piecewise functions.</p>
Week 25	Review Test 11 Performance Task 11 Investigation 6 Lesson 61		<ul style="list-style-type: none"> <li>*Be able to derive the quadratic formula.</li> <li>*Be able to understand advanced factoring.</li> </ul>

<p>Week 26 (4 days)</p>	<p>Lesson 62 Lesson 63 Lab 10 Lesson 64</p>	<p>Lesson 62: #1 [N-CN2] #2 [N-CN2] #3 [N-CN7] #4 [N-CN8] #6 [A-SSE1a]</p> <p>Lesson 63: #32 [F-TF1] #33 [F-TF2] #34 Alabama</p> <p>Lab 10: #29 [F-BF3]</p>	<ul style="list-style-type: none"> <li>*Be able to use complex numbers.</li> <li>*Be able to understand the unit circle and radian measures.</li> <li>*Be able to use the log keys on a graphing calculator.</li> <li>*Be able to use the properties of logarithms.</li>   <li>* Know there is a complex number <math>i</math> such that <math>i^2 = -1</math>, and every complex number has the form <math>a + bi</math> with <math>a</math> and <math>b</math> real. [N-CN1]</li> <li>* Use the relation <math>i^2 = -1</math> and the commutative, associative, and distributive properties to add, subtract, and multiply complex numbers. [N-CN2]</li> <li>* Solve quadratic equations with real coefficients that have complex solutions. [N-CN7]</li> <li>* (+) Extend polynomial identities to the complex numbers. [N-CN8]</li> <li>* Understand radian measure of an angle as the length of the arc on the unit circle subtended by the angle. [F-TF1]</li> <li>* Explain how the unit circle in the coordinate plane enables the extension of trigonometric functions to all real numbers, interpreted as radian measures of angles traversed counterclockwise around the unit circle. [F-TF2]</li> <li>* Define the six trigonometric functions using ratios of the sides of a right triangle, coordinates on the unit circle, and the reciprocal of other functions. (Alabama)</li> <li>* Identify the effect on the graph of replacing <math>f(x)</math> by <math>f(x) + k</math>, <math>k f(x)</math>, <math>f(kx)</math>, and <math>f(x + k)</math> for specific values of <math>k</math> (both positive and negative); find the value of <math>k</math> given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. Include recognizing even and odd functions from their graphs and algebraic expressions for them. [F-BF3]</li> </ul>
-----------------------------	---	---	--

Week 27	Lesson 65 Review Test 12 Performance Task 12 Lesson 66		*Be able to use the quadratic formula to solve equations. *Be able to solve polynomial equations.
Week 28	Lesson 67 Lesson 68 Lesson 69 Lesson 70 Review	Lesson 68: #45 [S-MD7] Lesson 69: #2 [N-CN2] Lesson 70: #20 [A-RE12]	*Be able to find inverse trigonometric functions. *Be able to find conditional probability. *Be able to simplify complex expressions. *Be able to solve radical equations. * (+) Analyze decisions and strategies using probability concepts (e.g., product testing, medical testing, pulling a hockey goalie at the end of a game). [S-MD7] * Use the relation $i^2 = -1$ and the commutative, associative, and distributive properties to add, subtract, and multiply complex numbers. [N-CN2] * Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise. [A-REI2]
Week 29	Test 13 Performance Task 13 Investigation 7 Lesson 71 Lesson 72	Investigation 7: #37 [S-ID4]	*Be able to collect data. *To use the Law of Sines. * Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages. Recognize that there are data sets for which such a procedure is not appropriate. Use calculators, spreadsheets, and tables to estimate areas under the normal curve. [S-ID4]
Week 30	Graduation Exam Week		

Week 31	Lab 11 Lesson 73 Lesson 74 Lesson 75 Review	Lab 11: #37 [S-ID4] Lesson 73: #40 [S-IC3] #41 [S-IC4] #42 [S-IC5] #43 [S-IC6]	<ul style="list-style-type: none"> <li>*Be able to calculate confidence intervals.</li> <li>*Be able to use sampling.</li> <li>*Be able to find the discriminant.</li> <li>*Be able to graph radical functions.</li> <li>* Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages. Recognize that there are data sets for which such a procedure is not appropriate. Use calculators, spreadsheets, and tables to estimate areas under the normal curve. [S-ID4]</li> <li>* Recognize the purposes of and differences among sample surveys, experiments, and observational studies; explain how randomization relates to each. [S-IC3]</li> <li>* Use data from a sample survey to estimate a population mean or proportion; develop a margin of error through the use of simulation models for random sampling. [S-IC4]</li> <li>* Use data from a randomized experiment to compare two treatments; use simulations to decide if differences between parameters are significant. [S-IC5]</li> <li>* Evaluate reports based on data. [S-IC6]</li> </ul>
Week 32	Test 14 Performance Task 14 Lesson 76 Lesson 77 Lesson 78	Lesson 76: #11 [A-APR3] Lesson 78: #7 [A-SSE2]	<ul style="list-style-type: none"> <li>*Be able to find polynomial roots I.</li> <li>*Be able to use the law of cosines to find missing sides and angles of triangles.</li> <li>*Be able to solve quadratic equations.</li> <li>* Identify zeros of polynomials when suitable factorizations are available, and use the zeros to construct a rough graph of the function defined by the polynomial. [A-APR3]</li> <li>* Use the structure of an expression to identify ways to rewrite it. [A-SSE2]</li> </ul>

Week 33	Lesson 79 Lab 12 Lesson 80 Review Test 15	Lesson 79: #25 [F-IF7b]	*Be able to understand piecewise functions. *Be able to find the normal distribution. * Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions. [F-IF7b]
Week 34	Performance Task 15 Investigation 8 Lesson 81 Lesson 82 Lesson 83	Lesson 81: #31 [F-LE4] Lesson 82: #35 [F-TF5]	*Be able to find the area under a curve. *Be able to use natural logarithms and their properties. *Be able to graph sine and cosine functions. *Be able to write quadratic equations from roots. * For exponential models, express as a logarithm the solution to $ab^{ct} = d$ where $a, c,$  and $d$ are numbers, and the base $b$ is 2, 10, or $e$ ; evaluate the logarithm using technology. [F-LE4] * Choose trigonometric functions to model periodic phenomena with specified amplitude, frequency, and midline.* [F-TF5]
Week 35	Lesson 84 Lesson 85 Review Test 16 Performance Task 16	Lesson 84: #20 [A-REI2]	*Be able to solve rational equations. *Be able to find polynomial roots. * Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise. [A-REI2]

Week 36	Lesson 86 Lesson 87 Lesson 88 Lesson 89 Lesson 90	Lesson 86: #22 [F-IF4] #35 [F-TF5] Lesson 88: #19 [A-CED4] Lesson 90: #22 [F-IF4] #35 [F-TF5]	*Be able to translate sine and cosine functions. *Be able to evaluate logarithmic expressions. *Be able to solve abstract equations. *Be able to solve quadratic inequalities. *Be able to graph the tangent function. * For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. <i>Key features include intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity.*</i> [F-IF4] * Choose trigonometric functions to model periodic phenomena with specified amplitude, frequency, and midline.* [F-TF5] * Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. [A-CED4] * For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. <i>Key features include intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity.*</i> [F-IF4]
---------	---	---	---

Week 37	Investigation 9 Catch up and Review for Exam	Investigation 9: #29 [F-BF3]	<p>*Be able to understand step functions.</p> <p>* Identify the effect on the graph of replacing <math>f(x)</math> by <math>f(x) + k</math>, <math>k f(x)</math>, <math>f(kx)</math>, and <math>f(x + k)</math> for specific values of <math>k</math> (both positive and negative); find the value of <math>k</math> given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. Include recognizing even and odd functions from their graphs and algebraic expressions for them. [F-BF3]</p>
Week 38	Exams		