

Sequence	Standard Group	Cluster Heading	Cluster Content	Text Ref:	# Days	Cumulative
1	Number & Quantity: The Real Number Systems	A. Use properties of rational and irrational numbers.	B.N.RN.A.1. Use rational and irrational numbers in calculations and in real-world context.	Unit 1; Lesson 2	1	1
2a	Algebra: Arithmetic with Polynomials and Rational Expressions	A. Perform arithmetic operations on polynomials.	B.A.APR.A.1 Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials.	Unit 11; Lessons 1-4	6	7
2b	Algebra: Seeing Structure in Expressions	A. Write expressions in equivalent forms to solve problems.	B.A.SSE.A.1 Use properties of multiplication and division to solve problems containing scientific notation.	Unit 1; Lesson 8	1	8
2b	Algebra: Seeing Structure in Expressions	A. Write expressions in equivalent forms to solve problems.	B.A.SSE.A.2 Use algebraic structures to solve problems involving proportional reasoning in real-world context.	Unit 7; Lesson 1 Unit 7; Lesson 5 Unit 7; Lesson 6	2	10
2c	Number & Quantity: Complex Numbers	A. Perform arithmetic operations with complex numbers.	B.N.CN.A.1 Know there is a complex number $i$ such that $i^2 = -1$ , and every complex number has the form $a + bi$ with $a$ and $b$ real.	Unit 12; Lesson 4	1	11

2c	Number & Quantity: Complex Numbers	A. Perform arithmetic operations with complex numbers.	B.N.CN.A.2 Know and use the relation $i^2 = -1$ and the commutative, associative, and distributive properties to add, subtract, and multiply complex numbers.	Unit 12; Lesson 4	2	13	
3a	Algebra: Creating Equations	A. Create equations that describe numbers or relationships.	B.A.CED.A.1 Create equations and inequalities in one variable and use them to solve real-world problems.	Unit 2; Lessons 3-7	4	17	
3a	Algebra: Creating Equations	A. Create equations that describe numbers or relationships.	B.A.CED.A.2 Create equations in two or more variables to represent relationships between quantities.	Unit 6; Lesson 4-6	3	20	CFA 1
3a	Algebra: Creating Equations	A. Create equations that describe numbers or relationships.	B.A.CED.A.3 Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations.	Unit 2: Lesson 5A	1	21	
3a	Algebra: Reasoning with Equations and Inequalities	D. Represent and solve equations and inequalities graphically.	B.A.REI.D.5 Solve a linear inequality using multiple methods and interpret the solution as it applies to the context.	Unit 2; Lesson 6-7	2	23	
3b	Number & Quantity: Quantities	A. Reason quantitatively and use units to solve problems.	B.N.Q.A.1 Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.	Unit 5; Lesson 1	2	25	

3b	Number & Quantity: Quantities	A. Reason quantitatively and use units to solve problems.	B.N.Q.A.2 Define appropriate quantities for the purpose of descriptive modeling.	Unit 2; Lesson 9 Spreadsheet Lab	0	25
3b	Number & Quantity: Quantities	A. Reason quantitatively and use units to solve problems.	B.N.Q.A.3 Solve problems involving squares, square roots of numbers, cubes, and cube roots of numbers.	Unit 1; Lesson 9 Unit 10; Lesson 1 Unit 12; Lesson 8A	2	27
3c	Algebra: Reasoning with Equations and Inequalities	A. Understand solving equations as a process of reasoning and explain the reasoning.	B.A.REI.A.1 Build functions and write expressions, equations, and inequalities for common algebra settings leading to a solution in context (e.g., rate and distance problems and problems that can be solved using proportions).	Unit 2; Lesson 2A, 3 Unit 12; Lesson 8	2	29
3c	Algebra: Reasoning with Equations and Inequalities	B. Solve equations and inequalities in one variable.	B.A.REI.B.2 Solve quadratic equations in one variable. Solve quadratic equations by inspection (e.g., for $x^2 = 49$ ), taking square roots, completing the square, knowing and applying the quadratic formula, and factoring, as appropriate to the initial form of the equation. <i>Recognize when the quadratic formula gives complex solutions and write them as <math>a \pm bi</math> for real numbers <math>a</math> and <math>b</math>.</i>	Unit 11; Lessons 3, 5-9	8	37

3c	Algebra: Reasoning with Equations and Inequalities	C. Solve systems of equations.	B.A.REI.C.3 Solve and explain the solutions to a system of equations using a variety of representations including combinations of linear and non-linear equations.	Unit 13; Lesson 11 Graphing Technology Lab	1	38
4a	Functions: Interpreting Functions	A. Understand the concept of function and use function notation	B.F.IF.A.1 Understand that a function from one set (called the domain) to another set (called the range) assigns to each element of the domain exactly one element of the range. If $f$ is a function and $x$ is an element of its domain, then $f(x)$ denotes the output of $f$ corresponding to the input $x$ . The graph of $f$ is the graph and use function of the equation $y = f(x)$ .	Unit 2; Lesson 2 Unit 12; Lesson 3A	2	40
4a	Functions: Interpreting Functions	A. Understand the concept of function and use function notation	B.F.IF.A.2 Use function notation, evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context.	Unit 2; Lesson 2	1	41
4a	Functions: Interpreting Functions	B. Interpret functions that arise in applications in terms of the context.	B.F.IF.B.3 Recognize functions as mappings of an independent variable into a dependent variable. ★	Unit 2; Lesson 2	0	41
4b	Algebra: Arithmetic with Polynomials and Rational Expressions	B. Understand the relationship between zeros and factors of polynomials	B.A.APR.B.2 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.	Unit 12; Lessons 5-7	4	45

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4c	Functions: Interpreting Functions	C. Analyze functions using different representations.	B.F.IF.C.4 Graph linear, quadratic, absolute value, and piecewise functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated ones. ★		2	47
4c	Functions: Interpreting Functions	C. Analyze functions using different representations.	B.F.IF.C.5 Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function.		2	49
4c	Functions: Interpreting Functions	C. Analyze functions using different representations.	B.F.IF.C.6 Use the properties of exponents to interpret expressions for exponential functions.		2	51
5a	Geometry: Geometric Measurement and Dimension	A. Visualize relationships between two-dimensional and three-dimensional objects.	B.G.GMD.A.1 Use relationships involving area, perimeter, and volume of geometric figures to compute another measure.		2	53
5a	Geometry: Geometric Measurement and Dimension	A. Visualize relationships between two-dimensional and three-dimensional objects.	B.G.GMD.A.2 Use several angle properties to find an unknown angle measure.		2	55
5a	Geometry: Geometric Measurement and Dimension	A. Visualize relationships between two-dimensional and three-dimensional objects.	B.G.GMD.A.3 Apply a variety of strategies using relationships between perimeter, area, and volume to calculate desired measures in composite figures (i.e., combinations of basic figures).		1	56

5b	Geometry: Modeling with Geometry	A. Apply geometric concepts in modeling situations.	B.G.MG.A.2 Solve problems involving surface area and volume in real-world context.		1	57	CFA 3
5c	Algebra: Reasoning with Equations and Inequalities	D. Represent and solve equations and inequalities graphically.	B.A.REI.D.4 Use algebra and geometry to solve problems involving midpoints and distances.	Unit 12; Lesson 8	2	59	
5d	Geometry: Similarity, Right Triangles, and Trigonometry	A. Understand similarity in terms of similarity transformations.	B.G.SRT.A.1 Apply similar triangles to solve problems, such as finding heights and distances.		2	61	
5e	Geometry: Similarity, Right Triangles, and Trigonometry	B. Define trigonometric ratios and solve problems involving right triangles.	B.G.SRT.B.2 Apply basic trigonometric ratios to solve right triangle problems.		4	65	
5e	Geometry: Similarity, Right Triangles, and Trigonometry	B. Define trigonometric ratios and solve problems involving right triangles.	B.G.SRT.B.3 Apply properties of $30^\circ$ $60^\circ$ $90^\circ$ , $45^\circ$ $45^\circ$ $90^\circ$ , similar, and congruent triangles.		2	67	
5e	Geometry: Similarity, Right Triangles, and Trigonometry	B. Define trigonometric ratios and solve problems involving right triangles.	B.G.SRT.B.4 Solve problems involving angles of elevation and angles of depression.		1	68	
5f	Geometry: Circles	A. Find arc lengths and areas of sectors of circles.	B.G.C.A.1 Apply a variety of strategies to determine the area and circumference of circles after identifying necessary information.		1	69	
6a	Statistics & Probability: Interpreting Categorical and Quantitative Data	B. Summarize, represent, and interpret data on two categorical and quantitative variables.	B.S.ID.B.2 Interpret and use data from tables, charts, and graphs.		3	72	

6b	Statistics & Probability: Interpreting Categorical and Quantitative Data	A. Summarize, represent, and interpret data on a single count or measurement variable.	B.S.ID.A.1 Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets.		2	74
6c	Geometry: Modeling with Geometry	A. Apply geometric concepts in modeling situations.	B.G.MG.A.1 Use appropriate technology to find the mathematical model for a set of non-linear data.		1	75
6c	Statistics & Probability: Interpreting Categorical and Quantitative Data	B. Summarize, represent, and interpret data on two categorical and quantitative variables.	B.S. ID.B.3 Represent data on two quantitative variables on a scatter plot, and describe how the variables are related.  <i>a. Fit a function to the data; use functions fitted to data to solve problems in the context of the data. Use given functions or choose a function suggested by the context. Emphasize linear, quadratic, and exponential models.</i>		1	76
6d	Statistics & Probability: Interpreting Categorical and Quantitative Data	C. Interpret linear models.	B.S.ID.C.4 Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data.		1	77
7a	Statistics & Probability: Conditional Probability and the Rules of Probability	A. Use the rules of probability to compute probabilities of compound events in a uniform probability model.	B.S.CP.A.1 Understand and use basic counting techniques in contextual settings.		1	78

7b	Statistics & Probability: Conditional Probability and the Rules of Probability	A. Use the rules of probability to compute probabilities of compound events in a uniform probability model.	B.S.CP.A.2 Compute a probability when the event and/or sample space are not given or obvious.		2	80
7c	Statistics & Probability: Conditional Probability and the Rules of Probability	A. Use the rules of probability to compute probabilities of compound events in a uniform probability model.	B.S.CP.A.3 Recognize the concepts of conditional and joint probability expressed in real-world contexts.		1	81
7d	Statistics & Probability: Conditional Probability and the Rules of Probability	A. Use the rules of probability to compute probabilities of compound events in a uniform probability model.	B.S.CP.A.4 Recognize the concept of independence expressed in real-world contexts.		1	82