

NEW 8th Grade Math 1 Pacing Guide 2016-2017:

UNIT 1- Functions (Part 1)			
Standard	# of EOC ?s	What is it?	# of days
8. F.3	2	Is function linear or non-linear given table, graph, equation, coordinate points	2
8.F.1	1	Definition of function, (input/output, vertical line test, list of ordered pair)	2
8.F.5	2	Match/sketch a graph to verbal description	2
F-IF.1	0	Domain and Range	3
F-IF.2	1-2	Use function notation, evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context. [evaluate f(5) of f(x)]	3
F-IF.5	0-1	Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes. (find appropriate domain for word problem)	3
Total	EOC:1-4 EOG: 5	TOTAL(including assessments):	15
UNIT 2- Linear Functions			
Standard	# of EOC ?s	What is it?	# of days
8.EE.6	2	Graphing linear equations	3
8.F.4	4	Write linear equation given slope, point on the line, table.	5
A-REI.10	0	Y=mx+b; "which of the following points is on the line?"	
8.EE.5	4	Compare/Interpret slope/y-intercept of equations, tables, graphs	5
8.F.2	3	Compare/Interpret slope/y-intercept of functions given equations, tables, graphs, or verbal description	
8.EE.7	3	Solving linear equations; (combine like terms, distributive property, # of solutions)	4
A-CED.4	1-2	Rearrange formulas; isolate variables	3
A-REI.6	1	Solve linear systems of equations (graphs & algebra & word problems)	11
8.EE.8	3	Systems of equations (graphing, solving with algebra, word problems)	
A-REI.5	0	Prove solving systems of equations	0
A-CED.1	4	Create equations and inequalities in one variable and use them to solve problems	4 (UNIT 3)
A-REI.3	0	Inequality word problems (some system problems)	0
A-REI.12	1	Graph the solutions to a linear inequality and system of linear inequalities	4
A-CED.3	3	Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or non-viable options in a modeling context.	3
Total	EOC:10-11 EOG: 19	TOTAL(including assessments):	42
UNIT 3- Exponential & Linear Functions			
NS.1	1	Real Number System; convert numbers to decimals, repeating	1

NS.2	2	Real Number System (estimate rational numbers and order them; place rational numbers on number line)	1
EE.1	1	Laws of exponents (multiply, divide, power of power, power of 1, power of 0, negative exponents)	3
EE.2	1	Square Roots & Cube roots (estimate on number line, arithmetic with roots; etc.)	2
N-RN.2	2	Rewrite expressions involving radicals and rational exponents using the properties of exponents. (ONLY INTEGER EXPONENTS) [FOCUS: fractional exponents with a numerator of 1.]	5
EE.3	1	Scientific Notation (standard form, word problems, some operations)	1
EE.4	1	Operations with Scientific Notation (+, -, x, /) (no word problems)	1
A-CED.2	2	Write linear and exponential equations from word problems	2
F-LE.1	1-2	Exponential vs. linear; which is better fit?	3
F-LE.3	1	Observe using graphs and tables that a quantity increasing exponentially eventually exceeds a quantity increasing linearly, quadratic; (when will $f(x)$ exceed $g(x)$); etc.)	2
F-LE.5	1	Interpret the parameters in a linear or exponential function in terms of a context. (what does “___” mean in the equation?)	2
A-REI.11	1	Where $f(x)$ and $g(x)$ intersect; linear and exponential functions	2
F-IF.6	1-2	Find average rate of change of linear and exponential data	3
F-BF.1	2-3 (+1 from LE.2)	Developing patterns; linear & exponential patterns; word problems (F.LE.2 got combined: Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs (include reading these from a table). -Also composition functions	6
F-IF.3	0	Recursive Functions	0
F-BF.2	0-1	Write arithmetic and geometric sequences with an explicit formula, use them to model situations, and translate between the two forms. (NEXT/NOW equations) (Now Formal notation***)	3
Total	EOC:11-15* EOG:7	TOTAL(including assessments):	37

UNIT 4 – Statistics

Standard	# of EOC ?s	What is it?	# of days
S-ID.1	0	Represent data with plots (dot plots, histograms, and box plots).	2
S-ID.2	1	Shape, center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets.	3
S-ID.3	1-2	Interpret differences in shape, center, and spread in the context of the data sets (outliers).	4
8.SP.4	1	Construct/interpret 2 way frequency table/relative frequency table	3
8.SP.1	1	Construct Scatterplots; +, -, weak strong association	1
S-ID.6	1	Scatterplot line of best fit; analyzing residuals? (linear & exponential)	2
8.SP.2	3	Line of best fit; fit of the line to data set;	4
8.SP.3	2	Use line of best fit to predict; interpret slope/intercept meaning for line of best fit	3
S-ID.7	1	Interpret the slope (rate of change) and the intercept (constant term) of a	

		linear equations/line of best fit	
S-ID.8	1-2	Compute (using technology) and interpret the correlation coefficient of a linear fit. (<i>strength & direction</i>)	3
S-ID.9	0	Distinguish between correlation and causation.	0
Total # ?	EOC:5-7 EOG:7	TOTAL(including assessments):	25

UNIT 5- Polynomial & Quadratics

Standard	# of EOC ?s	What is it?	# of days
A-APR.1	1	add, subtract, and multiply polynomials. (Focus on: <i>limit to addition and subtraction of quadratics and multiplication of linear expressions.</i>)	4
A-APR.3	?	Understand the relationships among the factors of a quadratic expression, the solutions of a quadratic equation, and the zeros of a quadratic function.	1
A-REI.4	?	Solve for the real solutions of quadratic equations in one variable by taking square roots and factoring.	1
A-SSE.3	0-1	Factor a quadratic expression to reveal the zeros of the function it defines. [At this level, the limit is quadratic expressions of the form $ax^2 + bx + c$.]	7
F.IF.4	1-2	Behaviors of graphs/word problems/tables (Quad, Linear, Exponential);	3
F.IF.7	1	Graphs of linear and quadratic equations (<i>domain & range, rate of change, intercepts, intervals, where function is increasing, decreasing, positive, negative, max, min, etc.</i>)	2
F.IF.8	2-3	Quadratic & Exponential word problems (<i>includes interpret growth and decay rates for exponential</i>)	6
F.IF.9	1	Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions) (Linear, Exponential, and Quadratic)	2
A-SSE.1	1	Interpret parts of an expression, such as terms, factors, and coefficients. b) Interpret complicated expressions by viewing one or more of their parts as a single entity. Note: At this level, limit to linear expressions, exponential expressions with integer exponents and quadratic expressions.	2
A-REI.1	?	Justify a chosen solution method and each step of the solving process for linear and quadratic equations using mathematical reasoning.	1
Total # ?	EOC 7-10** EOG: 0	TOTAL(including assessments):	29

UNIT 6- Geometry

Standard	# of EOC ?s	What is it?	# of days
8.G.1	0	Parallel lines, angles, rotations, reflections, translation	0
8.G.2	0	2D shapes congruent by using translations, rotations, reflections, dilations	0
8.G.3	2	Dilations, translations, rotations, reflections of 2D shapes on coordinate plane	2
8.G.4	0	2D shapes similar by using translations, rotations, reflections, dilations	0
8.G.5	2	Angles (interior, exterior, transversal, sum of angles, etc.)	2
G-GPE.4	1 (+1 from GPE.7)	Given coordinate points, prove what shape. (GPE.7 combined here: Use Distance Formula to find perimeter and area of polygons)	3
G-GPE.5	1	Parallel and perpendicular lines; find the equation of a line parallel or	2

		perpendicular to a given line that passes through a given point	
G-GPE.6	1	Know and use Midpoint Formula	2
8.G.6	0	Proof/explain Pythagorean Theorem	0
8.G.7	3	Pythagorean Theorem (use PYT to find area/perimeter of right triangles, Golden Triangle, Pythagorean Triples, etc.)	3
8.G.8	2	Use Pythagorean Theorem to find the distance between two points on coordinate plane	1
G.9	2	Volume (cones, cylinder, spheres) [MEMORIZE FORMULAS]	3
Total # ?	EOC:3-4 EOG:11	TOTAL(including assessments):	18
UNIT 7-Miscellaneous Standards & REVIEW			
Standard	# of EOC ?s	What is it?	# of days