

Math I – Pacing Guide

Topic	Days/Extra Info	Standards	Needs to be Covered
Review	2 Days *Pre – Test, intro to calculators, class expectations	A.SSE.1a	Combining like Terms Distributive Property
		G.GMD.1	Writing expressions/equations
Equations	4 Days	A.REI.1	solving and justifying solving simple equations
		A.REI.3	solve linear equations in one variable, literal equations
		A.CED.4	rearrange formulas (literal equations)
		G.GMD.3	use volume formulas (students do not need to memorize these formulas but be able to use them-they are embedded in the questions on)
		A.CED.1	create equations and use them to solve problems
		A.CED.3	represent constraints by equations and interpret solutions as viable or nonviable (this can be done as you do word problems for linear equations)
Inequalities	2 Days	A.REI.3	solve linear inequalities
		A.CED.3	represent constraints by inequalities and interpret solutions
		A.CED.1	create inequalities and use them to solve problems

**Standards N.Q.1, N.Q.2 & N.Q.3 need to be reiterated whenever possible.

Math I – Pacing Guide

Topic	Days/Extra Info	Standards	Needs to be Covered
Linear Functions	16 days *Review Slope by graphs and using the formula. *Review putting equations into slope intercept form (solving for y) * Write equations of lines * Build functions	A.REI.10	represent and solve equations and inequalities graphically
		F.IF.7a	graph functions expressed symbolically and show key features of the graph
		A.CED.2 & A.CED.3	create equations and represent their constraints
		F.IF.1	define domain and range
		F.IF.2	function notation
		F.IF.4	interpret functions that arise in applications
		F.LE.5	interpret the parameters in a linear function in terms of a context
		F.IF.5	relate domain to the relationship it describes
		F.IF.3	recursive functions
		F.IF.6	calculate and interpret average rate of change
		F.BF.3	vertical/horizontal translations of linear functions
		F.BF.1	build functions
		G.GPE.5	prove the slope criteria for parallel and perpendicular lines
Systems of Equations/ Inequalities	6 Days	A.REI.6	solve systems of equations exactly and approximately
		A.REI.5	elimination and substitution method
		A.REI.11	explain why the solutions work
		A.REI.12	graph solutions to a system of linear inequalities
		A.CED.3	represent constraints on systems of equations/inequalities and interpret solutions as viable/non-viable

**Standards N.Q.1, N.Q.2 & N.Q.3 need to be reiterated whenever possible.

Math I – Pacing Guide

Topic	Days/Extra Info	Standards	Needs to be Covered
Polynomials	4 Days * Review Exponent Rules	A.APR.1	operations on polynomials (add/subtract/multiply)
Quadratics	10 Days	A.SSE.1a	interpret parts of an expressions, such as terms, factors, coefficients
		A.SSE.2	difference of squares
		A.SSE.3	factor quadratics to reveal zeros
		F.IF.8a	use the process of factoring to show zeros, extreme values, symmetry
		F.IF.7a	graph quadratic functions to show intercepts, max and min
		F.IF.4	interpret functions that arise in applications in terms of context
		F.BF.1	build a function that models a relationship between two quantities

**Standards N.Q.1, N.Q.2 & N.Q.3 need to be reiterated whenever possible.

Math I – Pacing Guide

Topic	Days/Extra Info	Standards	Needs to be Covered
Exponents & Radicals	6 Days * There seems to be a bigger emphasis on understanding and applying exponential functions in common core.	N.RN.1	definition of rational exponents
		N.RN.2	rewrite expressions involving radicals/rational expressions
Exponential Functions	5 Days	F.LE.5	interpret the parameters in exponential functions in terms of a context
		F.IF.8b	use properties of exponents to interpret expressions for exponential functions (identify growth/decay)
		A.SSE.1b	interpret complicated expressions as their parts
		A.CED.1	create equations and use them to solve problems (exponential regression)** Students have to write a linear and exponential function give a table without a calculator
		F.BF.1	build a function that describes a relationship between 2 quantities
		A.REI.10 & F.IF.7	understand the graph of an equation often forms a curve and graph exponentials showing intercepts
		F.IF.5 & F.IF.2	use functions notation and relate the domain of a function
		F.LE.2	construct exponential functions from a graph, relationship, or input-output pairs
		A.CED.2	evaluate exponential functions
		F.IF.4	find key features of a graph in applications

**Standards N.Q.1, N.Q.2 & N.Q.3 need to be reiterated whenever possible.

Math I – Pacing Guide

Topic	Days/Extra Info	Standards	Needs to be Covered
Translations	3 Days	F.BF.3	vertical/horizontal translations
Comparing Functions	4 Days * At this point, review linear, quadratic and exponential functions their graphs and their equations.	F.LE.3	observe using graphs and tables that a quantity increasing exponentially eventually exceeds a linear or quadratic
		F.LE.1	construct and compare linear and exponential models and solve problems
		F.IF.9	compare properties of two functions represented in different ways
Geometry	5 Days	G.CO.1	definitions of angle, circle, perpendicular, parallel, line segment
		G.GPE.6	midpoint formula
		G.GPE.4 & G.GPE.7	distance formula to prove points are on a line and to find perimeters of polygons and areas of triangles/rectangles
Data	5 Days * Review plotting points, introduce terms such as point, line segment domain, range.	S.ID.1	dot plots, histograms, box plots
		S.ID.2	data distribution and spread ** Students need to understand the word variability as related to the set of data.
		S.ID.3	interpret differences in shapes, outliers

**Standards N.Q.1, N.Q.2 & N.Q.3 need to be reiterated whenever possible.

Math I – Pacing Guide

Pacing Guide for Math I

This pacing guide has been divided into units. There are several standards that can be located into different units.

*Standards N.Q.1, N.Q.2 & N.Q.3 need to be reiterated whenever possible.

*Keep in mind that part of the Math I exam is calculator inactive so students will need practice without the calculator.

Unit 1 - Review (2 days)

- Pre-Test
- Introduction to Calculator
- Combining like Terms
- Distributive Property
- Writing expressions/equations
- Patterns

Unit 2 - Equations (4 days)

- Solving all types
- Literal equations
- Use of formulas

Unit 3 - Inequalities (2 days)

- Solve Linear inequalities
- Writing inequalities as a real life application

Unit 4 -Linear Functions (16 days)

- Define functions, domain and range
- Slope (calculating from graph, table, formula and comparing)
- Define parallel and perpendicular
- Solving for y.
- Graphing lines with and without a calculator
- Real life application of slope intercept form.
- Writing equations of lines
- Reading and understanding scatter plots
- Lines of best fit/Regression

**Standards N.Q.1, N.Q.2 & N.Q.3 need to be reiterated whenever possible.

Math I – Pacing Guide

Unit 5 - Systems of Equations/Inequalities (6 days)

- Solving systems of equations using the calculator and elimination.
- Systems of equations application problems (word problems)
- Solving systems of inequalities with a without the calculator

Unit 6 - Polynomials (4 days)

- Adding and subtracting polynomials
- Multiplying Polynomials
- Multiplying binomial by trinomial

Unit 7 - Quadratics (10 days)

- all types of factoring
- Solving quadratics
- Graphing quadratics with and without a calculator
- finding roots, max and min
- Writing equations of quadratics given a table or chart.

Unit 8 - Exponents & Radicals (6 days)

- Exponent rules
- Zero as an exponent
- Negative Exponents

- Radial notation (rewriting and simplifying)

Unit 9 - Exponential Functions (5 days)

- Graphing
- Growth/Decay
- Writing Equations

Unit 10 - Translations (3 days)

- Understanding movements of up, down, left, right on a graph

Unit 11- Comparing Functions (4 days)

- Compare linear, quadratics, and exponential

Unit 12 - Geometry (5 days)

- Midpoint formula
- Distance Formula
- Perimeter and Area
- Pythagorean Theorem
- Parallel and Perpendicular

Unit 13 - Data (5 days)

- Mean, Median, mode, range, quartiles, interquartiles range, standard deviation.
- Box and Whisker
- Histograms and Dot plots
- Frequency Tables

Math I – Pacing Guide

- Variability and peaks

**Standards N.Q.1, N.Q.2 & N.Q.3 need to be reiterated whenever possible.