Scope and Sequence for Algebra 1: Common Core rollout 2012-13

Algebra 1: Semester 1

Introductory Unit
5 Days

Topics	CCSS Standards
Evaluating Expressions	N.Q.1, A.SSE.1
Simplifying Expressions	N.Q.1, A.SSE.1
Writing Expressions & Unit Analysis	N.Q.1, N.Q.1, A.SSE.1, A.SSE.2
Writing Equations & Inequalities	N.Q.2, A.CED.1, A.CED.3
Representing Functions	N.Q.1, F.IF.1, F.IF.2, F.IF.5
Modeling Functions	N.Q.1, F.IF.1, F.IF.2, F.IF.5, N.BF.1

Linear equations & inequalities in 1 variable
15 Days

Topics	CCSS Standards
Solving Linear Equations	A.SSE.2, A.REI.1, A.REI.3
Solving Linear Inequalities	A.SSE.2, A.REI.1, A.REI.3
Modeling with 1 Variable Linear Equations & Inequalities	N.Q.1, N.Q.2, A.CED.1, A.CED.2, A.CED.3, F.BF.1
Literal Equations / Inequalities	A.REI.1, A.REI.3, A.CED.4
Re-writing Formulas	A.CED.2, A.CED.3,

Linear equations & inequalities in 2 variables
20 Days

Topics	CCSS Standards
Discrete Linear Functions	F.IF.1, F.IF.2, F.IF.3, F.IF.5, F.IF.7, F.BF.2
Continuous Linear Functions	N.Q.1, F.IF.1, F.IF.2, F.IF.5, F.IF.9
Using Slope	N.Q.1, A.CED.2, F.IF.4, F.IF.6, F.IF.7
Changing the Values of m & b in f(x)=mx+b	F.IF.4, F.BF.3, F.LE.5
Linear Equations in Two Variables	A.CED.2, A.REI.10, F.IF.4
Linear Inequalities in Two Variables	A.REI.12, F.IF.4
Modeling with Two-Variable Linear Equations / Inequalities	N.Q.1, N.Q.2, A.SSE.1, A.CED.2, A.CED.3, FIF.5, F.IF.6

Writing & Modeling linear functions
15 Days

Topics	CCSS Standards
Writing Linear Functions	A.CED.2, A.REI.11, F.IF.4, F.IF.6, F.BF.1, F.BF.2, F.LE.2
Correlation	S.ID.6, S.ID.8, S.ID.9
Fitting Lines to Data	F.LE.5, S.ID.6, S.ID.7

Modeling unit
4 Days

Solving linear systems
15 Days

Topics	CCSS Standards
Solving Linear Systems by Graphing	A.REI.6, A REI.11
Solving Linear Systems by Substitution	A.REI.6, A REI.11
Solving Linear Systems by Adding or Subtracting	A.REI.6
Solving Linear Systems by Multiplying	A.REI.5, A.REI.6
Solving Linear Systems of Linear Inequalities	A.REI.12
Model with Linear Systems	N.Q.1, N.Q.2, A.CED.2, A.CED.3, A.REI.6, A.REI.12

Project
4 Days

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Scope and Sequence for Algebra 1: Common Core rollout 2012-13

Algebra 1: Semester 2

Using Exponents
5 Days

Topics	CCSS Standards
Review & Apply Properties of Exponents	N.RN.3
Explain and use Rational Exponents	A.SSE.3c, N.RN.1, N.RN.2
Review Simplifying Square & Cube Roots	

Exponential Functions & their Graphs
15 Days

Topics	CCSS Standards
Discrete Exponential Functions	A.CED.2, F.IF.1-7, F.LE.2, F.BF.2, A.REI.10
Exponential Growth Functions	F.IF.1, F.IF.5, F.IF.6, F.IF.7, F.LE.1, F.LE.2, F.LE.5
Exponential Decay Functions	F.IF.1, F.IF.4, F.IF.6, F.IF.7, F.LE.1, F.LE.2, F.LE.5
Changing the values of a & b in exponentials	F.IF.4, F.BF.3
Solving Equations involving Exponents	A.CED.1, A.CED.2, A.REI.11, F.BF.1, F.LE.2
Performing Exponential Regression	A.CED.2, F.BF.1, F.LE.1, F.LE.5, S.ID.6
Comparing Linear & Exponential Functions	F.LE.1, F.LE.3, F.LE.5
Modeling with Exponential Functions	A.REI.11, F.BF.1, F.BF.2, F.LE.1, F.LE.2, F.LE.5, S.ID.6, F.IF.4, F.IF.5, F.IF.9

Piecewise & Absolute Value Functions
15 Days

Topics	CCSS Standards
Piecewise Functions	A.CED.2, F.IF.2, F.IF.4, F.IF.5, F.IF.7, F.BF.1
Translating the graph of $f(x) = |x|$	A.CED.2, F.IF.2, F.IF.7, F.BF.1, F.BF.3
Single Transformations of $f(x) = |x|$	A.CED.2, F.IF.2, F.IF.7, F.BF.1, F.BF.3
Combining Transformations	A.CED.2, F.IF.2, F.IF.7, F.BF.1, F.BF.3
Solving Absolute Value Equations & Inequalities	A.CED.1, ACED.2, A.REI.11
Modeling with Absolute Value functions	A.CED.2, F.IF.2, F.IF.4, F.IF.5, F.IF.7, F.BF.1

Quadratic Functions & their Graphs
15 Days

Topics	CCSS Standards
Translating the graph of $f(x)=x^2$	F.IF.2, F.IF.4, F.IF.5, F.IF.7, F.BF.1, F.BF.3
Single Transformations of $f(x) =x^2$	A.CED.2, F.IF.2, F.IF.4, F.IF.7, F.BF.1, F.BF.3
Combining Transformations	A.CED.2, F.IF.2, F.IF.4, F.IF.7, F.BF.1, F.BF.3
Solving Quadratic equations graphically	A.CED.1, A.CED.2, A.REI.11, F.IF.7
Solving Quadratic equations using roots	A.CED.1, A.REI.4
Modeling with Quadratic Functions	N.Q.1, N.Q.2, A.CED.2, F.IF.2, F.IF.4, F.BF.1

Solving Quadratic Equations many ways
20 Days

Topics	CCSS Standards
Multiplying Binomials	A.SSE.1, A.APR.1
Solving $x^2 + bx + c = 0$ by Factoring	A.SSE.3, A.REI.4. F.IF.8
Solving $ax^2 + bx + c = 0$ by Factoring	A.SSE.3, A.CED.1, A.REI.4, F.IF.8, F.BF.1
Solving x^2 & $ax^2 bx + c = 0$ by Completing the Square	A.REI.4
Deriving the Quadratic Formula	A.REI.4
Solving $ax^2 + bx + c = 0$ by the Quad. Formula	A.CED.1, A.REI.4
Graphing Functions of the form $f(x)= ax^2 + bx + c$	F.IF.4, F.IF.5, F.IF.7, F.IF.8, F.BF.1
Solving Systems of Linear and Quadratic Functions	A.CED.2, A.REI.4, A.REI.7, F.IF.4, A.REI.11
Modeling with Quadratic Functions	A.SSE.3, A.REI.4, F.IF.4, F.IF.6, F.IF.7, F.IF.8

Statistics
5 Days

Topics	CCSS Standards
Measures of Center & Spread	S.ID.2
Data Distribution & Outliers	S.ID.1, S.ID.2, S.ID.3
Histograms	S.ID.1, S.ID.2
Box Plots	S.ID.1, S.ID.2
Two-Way Frequency Tables	S.ID.5

Scope and Sequence for Formal Geometry: Common Core rollout 2012-13

Formal Geometry : Semester 1

Introductory Terms & Constructions

20 Days

Topics	CCSS Standards
Basic Terms and Constructions	G.CO.1, G.CO.12
The Distance Formula	G.GPE.4
The Midpoint Formula	G.GPE.4
Angle Measure	
Angles	G.CO.1, G.CO.12

Logic & Language of Geometry

15 Days

Topics	CCSS Standards
Inductive Reasoning and Conjecture	
Conditional Statements	
Postulates	
Algebraic	
Segment Addition Postulate	
Proving Angle Relationships	

Parallel & Perpendicular Lines

15 Days

Topics	CCSS Standards
Parallel and Perpendicular Lines	G.CO.1, G.CO.12
Slope and Parallel Lines	G.GPE.5
Slope and Perpendicular Lines	G.GPE.5
Proofs About Line Segments and Angles	G.CO.9
Proofs About Parallel and Perpendicular Lines	G.CO.9
Coordinate Proofs Using Slope	G.GPE.4

Congruence

15 Days

Topics	CCSS Standards
Congruence and Triangles	G.CO.7
Developing Congruence Criteria	G.CO.7, G.CO.8
Using Congruence Criteria	G.SRT.5
The Triangle Sum Theorem	G.CO.10
The Isosceles Triangle Theorem	G.CO.10
Congruence Transformations	
Coordinate Proofs	G.CO.10, G.GPE.4

Bisectors, Medians & Inequalities

10 Days

Topics	CCSS Standards
Angle Bisectors	G.CO.2, G.CO.9
Perpendicular Bisectors	G.CO.2, G.CO.9
Medians of a Triangle	G.CO.10, G.GPE.4
Indirect Proofs	
Triangle Inequality	
Inequalities in Two Triangles	

Symmetry & Transformations

10 Days

Topics	CCSS Standards
Symmetry	G.CO.3
Transformations and Rigid Motions	G.CO.2
Reflections	G.CO.2, G.CO.4, G.CO.5, G.CO.6
Translations	G.CO.2, G.CO.4, G.CO.5, G.CO.6
Rotations	G.CO.2, G.CO.4, G.CO.5, G.CO.6
Congruence	G.CO.5, G.CO.6
Properties of Dilations	G.SRT.1, G.CO.2
Drawing Dilations	G.CO.2

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Created by Glenn Waddell, based on the 20 June 2012 version of the Washoe County School District Formal Geometry blueprint.

Scope and Sequence for Formal Geometry: Common Core rollout 2012-13

Formal Geometry : Semester 2

Ratios & Proportions of Polygons & Triangles

13 Days

Topics	CCSS Standards
Similarity	G.SRT.2, G.C.1
Similarity and Triangles	G.SRT.2, G.SRT.3
Ratio of Areas of Similar Polygons	
Solving Problems Using Similarity	G.SRT.5, G.MG.3
Partitioning a Segment	G.GPE.6
The Triangle Proportional Theorem	G.SRT.4, G.SRT.5
Midsegment of a Triangle	G.CO.10, G.GPE.4
Proving the Pythagorean Theorem	G.SRT.4, G.SRT.5

Trigonometric Ratios & Functions

15 Days

Topics	CCSS Standards
The Geometric Mean	
The Tangent Ratio	G.SRT.6
The Sine and Cosine Ratios	G.SRT.6, G.SRT.7
Special Right Triangles	G.SRT.6, G.SRT.7
Solving Right Triangles	G.SRT.8
Trigonometric Ratios of Obtuse Angles	G.SRT.9+
The Law of Sines	G.SRT.10+, G.SRT.11+
The Law of Cosines	G.SRT.10+, G.SRT.11+

Parallelograms

13 Days

Topics	CCSS Standards
Angles of Polygons	
Sides and Angles of Parallelograms	G.CO.11
Diagonals of Parallelograms	G.CO.11
Criteria for Parallelograms	G.CO.11
Special Parallelograms	G.CO.11, G.SRT.5
Kites and Trapezoids	

Arcs & Chords

18 Days

Topics	CCSS Standards
Central Angles and Inscribed Angles	G.C.2
Constructing Circumscribed Circles	G.C.3
Constructing Inscribed Polygons	G.CO.12
Inscribed Quadrilaterals	G.C.3
Tangent Lines	G.C.2, G.C.4+
Constructing Inscribed Circles	G.C.3
Secants, Tangents and Angle Measures	
Special Segments in a Circle	
Perimeter and Area on the Coordinate Plane	G.GPE.7, G.MG.1, G.MG.2
Circumference	G.GMD.1, G.MG.1
Arc Length	G.CO.1, G.C.5
Area of Circles and Sectors	G.C.5, G.GMD.1

3-Dimensional Figures & Volumes

14 Days

Topics	CCSS Standards
Visualizing 3-Dimensional Figures	G.GMD.4
Surface Area	
Volume of Prisms and Cylinders	G.GMD.1, G.GMD.2+, G.GMD.3, G.MG.1, G.MG.2
Volumes of Pyramids	G.GMD.1, G.GMD.3
Volume of Cones	G.GMD.1, G.GMD.3
Volume of Spheres	G.GMD.2+, G.GMD.3, G.MG.2
Solving Design Problems	G.GMD.3, G.MG.3

Probability

12 Days

Topics	CCSS Standards
Probability and Set Theory	S.CP.1
Random Sampling and Probability	S.MD.6+
Permutations and Permutations in Probability	S.CP.9+
Combinations and Combinations in Probability	S.CP.9+
Mutually Exclusive and Overlapping Events	S.CP.7
Conditional Probability	S.CP.3, S.CP.4, S.CP.5, S.CP.6
Independent Events	S.CP.2, S.CP.3, S.CP.4, S.CP.5
Dependent Events	S.CP.8+
Making Fair Decisions	S.MD.6+
Analyzing Decisions	S.CP.4, S.MD.7+

Scope and Sequence for Geometry: Common Core rollout 2012-13

Geometry : Semester 1

Introductory Terms & Constructions
5 Days

Topics	CCSS Standards
Basic Terms & Constructions	G.CO.1, G.CO.12
The Distance Formula	G.GPE.4
The Midpoint Formula	G.GPE.4
Angles	G.CO.1, G.CO.12

Parallel & Perpendicular Lines
15 Days

Topics	CCSS Standards
Parallel & Perpendicular Lines	G.CO.1, G.CO.12
Perpendicular Bisectors	G.CO.2, G.CO.9
Angle Bisectors	G.CO.2, G.CO.9
Proofs about Line Segments & Angles	G.CO.9
Proofs about Parallel & Perpendicular lines	G.CO.9

Translations & Transformations
10 Days

Topics	CCSS Standards
Transformations & Rigid Motions	G.CO.2
Reflections	G.CO.2, G.CO.4, C.GO.5, C.CO.6
Translations	G.CO.2, G.CO.4, C.GO.5, C.CO.6
Rotations	G.CO.2, G.CO.4, C.GO.5, C.CO.6

Congruence
15 Days

Topics	CCSS Standards
Congruence	G.CO.5, G.CO.6
Congruence & Triangles	G.CO.7
The Triangle Sum Theorem	G.CO.10
Developing Congruence Criteria	G.CO.7, G.CO.8
Using Congruence Criteria in Proofs	G.SRT.5
The isosceles Triangle Theorem	G.CO.10

Symmetry
15 Days

Topics	CCSS Standards
Symmetry	G.CO.3
Sides & Angles of Parrallelograms	G.CO.11, G.SRT.5
Diagonals of Parallelograms	G.CO.11, G.SRT.5
Criteria for Parallelograms	G.CO.11, G.SRT.5
Special Parallelograms	G.CO.11, G.SRT.5

Dilations
20 Days

Topics	CCSS Standards
Properties of Dilations	G.SRT.1, G.CO.2
Drawing Dilations	G.CO.2
Similarity	G.SRT.2, G.C.1
Similarity & Triangles	G.SRT.2, G.SRT.3
Ratios & Proportions	
Solving Problems Using Similarity	G.SRT.5, G.MG.3
The Triangle Proportional Theorem	G.SRT.4, G.SRT.5
Midsegment of a Triangle	G.CO.10, G.GPE.4
Proving the Pythagorean Theorem	G.SRT.4, G.SRT.5

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Scope and Sequence for Geometry: Common Core rollout 2012-13

Geometry : Semester 2

Trigonometric Ratios & Right Triangles

10 Days

Topics	CCSS Standards
The Tangent Ratio	G.SRT.6
The Sine & Cosine Ratios	G.SRT.6, G.SRT.7
Special Right Triangles	G.SRT.6, G.SRT.7
Solving Right Triangles	G.SRT.8

Additional Constructions

15 Days

Topics	CCSS Standards
Central Angles and Inscribed Angles	G.C.2
Constructing Circumscribed Circles	G.C.3
Constructing Inscribed Polygons	G.CO.13
Inscribed Quadrilaterals	G.C.3
Tangent Lines	G.C.2
Constructing Inscribed Circles	G.C.3

Slopes & Lines

10 Days

Topics	CCSS Standards
Partitioning a Segment	G.GPE.6
Slope and Parallel Lines	G.GPE.5
Slope and Perpendicular Lines	G.GPE.5
Coordinate Proofs using Slope	G.GPE.5

Perimeter & Circumference

10 Days

Topics	CCSS Standards
Perimeter and Area on the Coordinate Plane	G.GPE.7, G.MG.1, G.MG.2
Circumference	G.GMD.1, G.MG.1
Arc Length	G.CO.1, G.C.5
Area of Circles and Sectors	G.C.5, G.GMD.1

3-Dimensional Figures & Volumes

15 Days

Topics	CCSS Standards
Visualizing Three-Dimensional Figures	G.GMD.4
Volume of Prisms and Cylinders	G.GMD.1, G.GMD.3, G.MG.1, G.MG.2
Volumes of Pyramids	G.GMD.1, G.GMD.3
Volume of Cones	G.GMD.1, G.GMD.3
Volume of Spheres	G.GMD.3, G.MG.2
Solving Design Problems	G.GMD.3, G.MG.3

Probability

15 Days

Topics	CCSS Standards
Probability and Set Theory	S.CP.1
Mutually Exclusive and Overlapping Events	S.CP.7
Conditional Probability	S.CP.3, S.CP.4, S.CP.5, S.CP.6
Independent Events	S.CP.2, S.CP.3, S.CP.4, S.CP.5
Analyzing Decisions	S.CP.4