

Algebra 1

Unit	Focus Standards	Connecting Standards
1. Expressions Equations and Inequalities (M1U1)	A.SSE.1a (Interpret parts of expressions/equations) A.REI.3 (Solve equations) A.CED.4 (Rearrange expressions)	N.Q.1 (Use units) N.Q.2 (Use appropriate quantities) N.Q.3 (Choose levels of accuracy)
2. Introduction to Functions (M1U3)	F.IF.1 (Understand functions) F.IF.2 (Use functions) F.IF.4 (Interpret key features) F.IF.5 (Relate domain) F.IF.6 (Calculate & interpret average rate of change) (include square root cube root piecewise step absolute value)	F.IF.3 (Recognizing sequences as functions)
3. Interpreting Functions (M1U4)	F.IF.4 (Interpret key features) F.IF.5 (Relate domain) F.IF.6 (Calculate & interpret average rate of change)	
4. Sequences and Relations (M1U5)	F.IF.3 (Recognizing sequences as functions) A.REI.10 (Understand graphs) A.CED.1 (Create equations in 1 variable) A.CED.2 (Create equations in 2 variables)	F.IF.7a (Graph & show key features)
5. Linear Modeling (M1U6)	A.SSE.1a (Interpret parts of expressions/equations) A.CED.1 (Create equations in 1 variable) A.CED.2 (Create equations in 2 variables) A.CED.3 (Represent constraints) A.CED.4 (Rearrange expressions) F.IF.4 (Interpret key features) F.IF.5 (Relate domain) F.IF.6 (Calculate & interpret average rate of change) F.BF.1a (Determine steps from a context) A.REI.12 (Graph using $\frac{1}{2}$ planes) (include linear piecewise and absolute value step)	N.Q.1 (Use units) N.Q.2 (Use appropriate quantities) N.Q.3 (Choose levels of accuracy) F.IF.7a (Graph & show key features) F.IF.7b (Graph functions)
6. Systems (M1U7)	A.CED.3 (Represent constraints) A.REI.11 (Explain solutions) A.REI.12 (Graph using $\frac{1}{2}$ planes)	A.REI.5 (Prove systems) A.REI.6 (Solve systems)

Major Standards

Supporting Standards

Additional Standards

7. Statistics (M1U8)	S.ID.7 (Interpret slope) S.ID.8 (Compute & interpret correlation coefficient) S.ID.9 (Distinguish between correlation and causation)	S.ID.1 (Represent data) S.ID.2 (Use statistics) S.ID.3 (Interpret differences) S.ID.5 (Summarize data) S.ID.6a (Represent data) S.IC.6c (Fit a linear function)
8. Extending the Number System (M2U1)	N.RN.3 (Irrational and rational numbers) A.APR.1 (Operating on polynomials) A.SSE.1b (Represent parts as a single entity) A.SSE.2 (Use structure to identify)	
9. Representations of Exponential Functions (M1U9)	F.IF.3 (Recognizing sequences as functions) A.REI.10 (Understand graphs) A.SSE.1a (Interpret parts of expressions/equations) A.SSE.1b (Interpret parts of expressions/equations) F.LE.1a (Prove growth differences) F.LE.1b (Recognize patterns in changes) F.LE.1c (Recognize patterns in changes of rate) F.LE.2 (Construct functions)	F.IF.9 (Compare properties)
10. Comparing Mathematical Models (M1U10)	F.LE.3 (Observe trends in graphs) F.IF.4 (Interpret key features) F.IF.5 (Relate domain) F.IF.6 (Calculate & interpret average rate of change) A.CED.1 (Create equations in 1 variable) F.BF.1a (Determine steps from a context)	S.ID.6a (Represent data) F.LE.5 (Interpret parameters) A.SSE.3c (Use properties of Exponents)
11. Quadratic Functions: Representations & Transformations (M2U2)	F.IF.7a (Show key features) F.IF.7b (End behavior of small functions) F.IF.4 (Key features) F.IF.9 (Compare functions) F.BF.3 (Algebraic Transformations) F.IF.6 (Average rate of change)	
12. Quadratic Functions:	A.SSE.3a (Factor quadratics) A.SSE.3b (Complete the square) A.CED.1 (Create and solve 1 variable equations) A.CED.2 (Create and solve 2 variable equations) A.CED.4 (Rearrange expressions)	A.SSE.1b (interpret expressions) A.SSE.2 (use structure to identify) N.Q.2 (appropriate quantities) F.IF.8a (equivalent forms show what on a graph)

Major Standards

Supporting Standards

Additional Standards

Working with Equations (M2U3)	A.REI.1(Explain steps of solving) A.REI.4a(Solve by completing the square/quadratic formula) A.REI.4b(Solve by inspection)	
13. Quadratic Functions: Working with Equations (M2U4)	F.IF.4(key features) F.IF.5(relate domain to application) F.IF.6(average rate of change) F.IF.7a(key features) F.IF.8a(equivalent forms show what on a graph) F.IF.9 (compare different representations) F.BF.1a(write a function) F.BF.1b(combine standard functions arithmetically)	A.CED.4 (rearrange equations)

This standard was not present in the Integrated Math 1 or Math 2, but is assessed in Algebra 1 (see excerpt from PARCC Evidence Statement Table).

A-APR.3 Identify zeros of quadratic and cubic polynomials in which linear and quadratic factors are available, and use the zeros to construct a rough graph of the function defined by the polynomial.

- i) For example, find the zeros of $(x - 2)(x^2 - 9)$.
- ii) Sketching graphs is limited to quadratics.
- iii) For cubic polynomials, at least one linear factor must be provided or one of the linear factors must be a GCF.

Geometry

Unit	Focus Standards	Connecting Standards
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Major Standards

Supporting Standards

Additional Standards

1. Geometry (M1U2)	<p>G.CO.6 (Use rigid motions)</p> <p>G.CO.7 (Show congruent triangles)</p> <p>G.CO.8 (Explain triangle congruency)</p> <p>G.CO.9 (Prove theorems about lines & angles)</p> <p>G.CO.10 (Prove theorems about triangles)</p> <p>G.CO.11 (Prove theorems about quadrilaterals)</p>	<p>G.CO.1 (Know definitions)</p> <p>G.CO.2 (Represent transformations)</p> <p>G.CO.3 (Describe rotations & reflections)</p> <p>G.CO.4 (Develop definitions)</p> <p>G.CO.5 (Draw transformed figures)</p>
2. Similarities and Volume (M2U6)	<p>G.SRT.1 (center & factor for dilation)</p> <p>G.SRT.2 (similarity in terms of dilation)</p> <p>G.SRT.3 (establish AA~)</p> <p>G.SRT.4 (side-splitter Pythagorean proof by similarity)</p> <p>G.SRT.5 (solve with similarity)</p> <p>G.GMD.1 (arguments for volume formula)</p> <p>G.GMD.3 (use volume formulas)</p>	
3. Right Triangles and Trigonometry (M2U7)	<p>G.SRT.6 (understand sides are related to angles in right triangles)</p> <p>G.SRT.7 (relationship sin and cos)</p> <p>G.SRT.8 (apply trig ratios)</p>	
4. Circles (M2U9)	<p>G.C.1 (circles are similar)</p> <p>G.C.2 (relationships in circles)</p> <p>G.C.3 (inscribed and circumscribe polygons)</p> <p>G.C.5 (arch length and sector area)</p> <p>G.CO.12 (constructions)</p> <p>G.CO.13 (constructions)</p> <p>G.GPE.1 (circle formula)</p>	<p>A.SSE.3 (equivalent forms)</p>
5. Geometric Proofs (M3U2)	<p>G.GPE.1 (Equation of a circle)</p> <p>G.GPE.4 (Algebraic coordinate proofs)</p> <p>G.GPE.5 (Slope with parallel and perpendicular lines)</p> <p>G.GPE.6 (Partition a line segment)</p> <p>G.GPE.7 (Perimeter and area from coordinates)</p> <p>G.C.1 (Circle similarity)</p> <p>G.C.2 (Angles radii and chords)</p> <p>G.C.3 (Inscribed and circumscribed figures)</p> <p>G.C.5 (Develop radian measure)</p> <p>G.CO.12 (Geometric constructions)</p> <p>G.CO.13 (Geometric constructions in a circle)</p> <p>A.SSE.3 (Equivalent forms of expressions)</p>	

Major Standards

Supporting Standards

Additional Standards

6. Geometric Modeling (M3U3)	G.MG.1 (Model objects) G.MG.2 (Use density to model situations) G.MG.3 (Use geometry to design) G.GMD.4 (2-D to 3-D)	
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Major Standards

Supporting Standards

Additional Standards

Algebra 2

Unit	Focus Standards	Connecting Standards
1. Statistics (M3U1)	S.IC.1 (Making inferences on a random sample) S.IC.2 (Using simulations) S.IC.3 (Surveys experiments observational studies) S.IC.4 (Population mean and margin of error) S.IC.5 (Randomized experiments) S.IC.6 (Evaluate reports based on data)(S.ID.6 (Represent and describe 2 variable data relationship S.ID.4 (Fit a normal distribution)	
2. Extending the Number System (M2U1)	N.RN.1 (Properties of rational exponents) N.RN.2 (Rational exponents and radical expressions) A.SSE.2 (Use structure to identify) N.CN.1 (Definition of complex number) N.CN.2 (Operations with i)	
3. Quadratic Functions: Working with Equations (M2U3)	A.SSE.3a (Factor quadratics) A.SSE.3b (Complete the square) A.CED.1 (Create and solve 1 variable equations) A.REI.1 (Explain steps of solving) A.REI.4a (Solve by completing the square/quadratic formula) A.REI.4b (Solve by inspection) N.CN.7 (quadratic formula with negative discriminates) A.REI.6 (3x3 linear only; see M1U7 or supplement) A.REI.7 (systems of quadratics and linear)	
4. Comparing Functions and Modeling (M2U5)	*F.LE.3 (compare linear and quadratic) *Necessary Previous Course Standard. F.IF.7a (key features) F.IF.7e (exponential graphs) S.ID.6a (fit a function to data) S.ID.6b (analyzing residuals) F.IF.8b (properties of exponents for exponential functions) F-BF.1.2 (arithmetic and geometric sequences; recursive and explicit. See M1U5 or supplement)	

Major Standards

Supporting Standards

Additional Standards

	F.LE.5 (Interpret parameters linear and exponential. See M1U10 or supplement)	
5. Representing Functions (M3U4)	F.IF.4 (Interpret key features) F.IF.6 (Average rate of change) F.IF.7c (Key features of polynomials) F.IF.7e (Key features of exponential and logarithms) F.BF.3 (Transformations using k) F.TF.1 (Radian measure in a unit circle) F.TF.2 (Trigonometric functions with real number domain)	
6. Polynomial and Rational: Representations and Modeling (M3U5)	A.SSE.2 (Rewrite expressions) A.CED.1 (Create rational equations and inequalities) A.REI.1 (Solve equations) A.REI.2 (Solve rational equations) A.REI.11 (Solve systems of equations) A.APR.2 (Remainder Theorem) A.APR.3 (Zeros and graphs of polynomials) A.APR.4 (Polynomial identities) A.APR.6 (Rewrite rational expressions) N.Q.2 (Define quantities) S.ID.6a (Evaluate reports based on data) F.IF.4 (Interpret key features) F.IF.6 (Average rate of change) F.IF.7c (Graph polynomial functions; identify key features) F.IF.9 (Compare functions from different representations) F.BF.3 (Transformations using k) F.BF.4a (Inverse of a function) G.GPE.2 (Equation of a parabola)	
7. Radicals Logarithms and Exponents: Representations and Modeling (M3U6)	N.Q.2 (Define quantities) A.SSE.4 (Sum of a finite geometric series) A.CED.1 (Create exponential equations and inequalities) A.REI.1 (Solve equations) A.REI.2 (Solve radical equations) A.REI.11 (Solve systems of equations) F.IF.4 (Interpret key features) F.IF.6 (Average rate of change) F.IF.7e (Graph exponential and logarithmic functions; key features)	

Major Standards

Supporting Standards

Additional Standards

	F.IF.9 (Compare functions from different representations) F.BF.3 (Transformations using k) F.LE.4 (Express exponentials as logarithms) S.ID.6a (Evaluate reports based on data)	
8. Trigonometric: Representations and Modeling (M3U7)	A.CED.1 (Create equations and inequalities) A.REI.11 (Solve systems of equations) A.SSE.2 (Rewrite expressions) F.IF.4 (Interpret key features) F.IF.6 (Average rate of change) F.IF.7e (Graph trigonometric functions) F.IF.9 (Compare functions from different representations) F.TF.1 (Radian measure in a unit circle) F.TF.2 (Trigonometric functions with real number domain) F.TF.5 (Model with trigonometric functions) F.TF.8 (Pythagorean Identity) F.BF.3 (Transformations using k) N.Q.2 (Define quantities) S.ID.6a (Evaluate reports based on data)	
9. Probability (M2U8)	S.CP.1 (events and subsets) S.CP.2 (def of independent) S.CP.3 ($P(A \text{ and } B)/P(B)$) S.CP.4 (two way frequency tables) S.CP.5 (conditional & independent in everyday language) S.CP.6 (conditional prob of A given B) S.CP.7 (addition rule)	

Not in the standards from Integrated

F-IF.3 Solve multi-step contextual word problems with degree of difficulty appropriate to the course, requiring application of course-level knowledge and skills articulated in F-BF.A, F-BF.3, F-IF.3, ACED.1, A-SSE.3, F-IF.B, F-IF.7. This standard should be reviewed starting in Unit 3, as it was a Major Content Standard in Algebra 1.

Major Standards

Supporting Standards

Additional Standards