

CCSS INTEGRATED PATHWAY MATH II CONTENT MAP

Unit 1: Extending the Number System			
Lesson	Sub-lesson number	Title	Standard(s)
Lesson 1	Working with the Number System		
	1.1.1	Defining, Rewriting, and Evaluating Rational Exponents	N–RN.1 N–RN.2
	1.1.2	Rational and Irrational Numbers and Their Properties	N–RN.2 N–RN.3
Lesson 2	Operating with Polynomials		
	1.2.1	Adding and Subtracting Polynomials	A–APR.1
	1.2.2	Multiplying Polynomials	A–APR.1
Lesson 3	Operating with Complex Numbers		
	1.3.1	Defining Complex Numbers, i , and i^2	N–CN.1
	1.3.2	Adding and Subtracting Complex Numbers	N–CN.2
	1.3.3	Multiplying Complex Numbers	N–CN.2
Unit 2: Quadratic Functions and Modeling			
Lesson	Sub-lesson number	Title	Standard(s)
Lesson 1	Analyzing Quadratic Functions		
	2.1.1	Graphing Quadratic Functions	F–IF.7a★
	2.1.2	Interpreting Various Forms of Quadratic Functions	F–IF.7a★ F–IF.8a
Lesson 2	Interpreting Quadratic Functions		
	2.2.1	Interpreting Key Features of Quadratic Functions	F–IF.4★
	2.2.2	Identifying the Domain of a Quadratic Function	F–IF.5★
	2.2.3	Identifying the Average Rate of Change	F–IF.6★
Lesson 3	Building Functions		
	2.3.1	Building Functions from Context	F–BF.1a★
	2.3.2	Operating on Functions	F–BF.1b★
Lesson 4	Graphing Other Functions		
	2.4.1	Square Root and Cube Root Functions	F–IF.7b★
	2.4.2	Absolute Value and Step Functions	F–IF.7b★
	2.4.3	Piecewise Functions	F–IF.7b★
Lesson 5	Analyzing Functions		
	2.5.1	Analyzing Exponential Functions	F–IF.8b
	2.5.2	Comparing Properties of Functions Given in Different Forms	F–IF.9 F–LE.3★
Lesson 6	Transforming Functions		
	2.6.1	Replacing $f(x)$ with $f(x) + k$ and $f(x + k)$	F–BF.3
	2.6.2	Replacing $f(x)$ with $k \cdot f(x)$ and $f(k \cdot x)$	F–BF.3
Lesson 7	Finding Inverse Functions		
	2.7.1	Finding Inverse Functions	F–BF.4a

Unit 3: Expressions and Equations

Lesson	Sub-lesson number	Title	Standard(s)
Lesson 1	Interpreting Structure in Expressions		
	3.1.1	Identifying Terms, Factors, and Coefficients	A–SSE.1a★
	3.1.2	Interpreting Complicated Expressions	A–SSE.1b★
Lesson 2	Creating and Solving Quadratic Equations in One Variable		
	3.2.1	Taking the Square Root of Both Sides	A–CED.1★ A–REI.4b
	3.2.2	Factoring	A–SSE.2 A–CED.1★ A–REI.4b
	3.2.3	Completing the Square	A–SSE.2 A–CED.1★ A–REI.4a A–REI.4b
	3.2.4	Applying the Quadratic Formula	A–CED.1★ A–REI.4a A–REI.4b
	3.2.5	Solving Quadratic Inequalities	A–SSE.2 A–CED.1★ A–REI.4b
Lesson 3	Creating Quadratic Equations in Two or More Variables		
	3.3.1	Creating and Graphing Equations Using Standard Form	A–CED.2★ A–SSE.3a★
	3.3.2	Creating and Graphing Equations Using the x -intercepts	A–CED.2★ A–SSE.3a★
	3.3.3	Creating and Graphing Equations Using Vertex Form	A–CED.2★ A–SSE.3b★
	3.3.4	Rearranging Formulas	A–CED.4★
Lesson 4	Fundamental Theorem of Algebra		
	3.4.1	Extending Polynomial Identities to Include Complex Numbers	N–CN.8 (+)
	3.4.2	Solving Quadratic Equations with Complex Solutions	N–CN.7 N–CN.9 (+)
Lesson 5	Rational Equations		
	3.5.1	Creating Rational Equations	A–CED.1★
	3.5.2	Graphing Rational Equations	A–CED.2★
	3.5.3	Creating Rational Inequalities	A–CED.1★
Lesson 6	Writing Exponential Expressions in Equivalent Forms		
	3.6.1	Writing Exponential Expressions in Equivalent Forms	A–SSE.3c★
Lesson 7	Solving Systems of Equations		
	3.7.1	Solving Systems Graphically	A–REI.7
	3.7.2	Solving Systems Algebraically	A–REI.7

Unit 4: Applications of Probability

Lesson	Sub-lesson number	Title	Standard(s)
Lesson 1	Events		
	4.1.1	Describing Events	S–CP.1*
	4.1.2	The Addition Rule	S–CP.7*
	4.1.3	Understanding Independent Events	S–CP.2*
Lesson 2	Conditional Probability		
	4.2.1	Introducing Conditional Probability	S–CP.3* S–CP.5* S–CP.6*
	4.2.2	Using Two-Way Frequency Tables	S–CP.4* S–CP.5* S–CP.6*
	4.2.3	The Multiplication Rule	S–CP.8* (+)
Lesson 3	Combinatorics		
	4.3.1	Combinations and Permutations	S–CP.9* (+)
	4.3.2	Probability with Combinatorics	S–CP.9* (+)
Lesson 4	Making and Analyzing Decisions		
	4.4.1	Making Decisions	S–MD.6* (+)
	4.4.2	Analyzing Decisions	S–MD.7* (+)

Unit 5: Similarity, Right Triangle Trigonometry, and Proof

Lesson	Sub-lesson number	Title	Standard(s)
Lesson 1	Line Segments		
	5.1.1	Midpoints and Other Points on Line Segments	G–GPE.6
Lesson 2	Investigating Properties of Dilations		
	5.2.1	Investigating Properties of Parallelism and the Center	G–SRT.1a
	5.2.2	Investigating Scale Factors	G–SRT.1b
Lesson 3	Defining and Applying Similarity		
	5.3.1	Defining Similarity	G–SRT.2
	5.3.2	Applying Similarity Using the Angle-Angle (AA) Criterion	G–SRT.3
Lesson 4	Proving Similarity		
	5.4.1	Proving Triangle Similarity Using Side-Angle-Side (SAS) and Side-Side-Side (SSS) Similarity	G–SRT.4
	5.4.2	Working with Ratio Segments	G–SRT.4
	5.4.3	Proving the Pythagorean Theorem Using Similarity	G–SRT.4
	5.4.4	Solving Problems Using Similarity and Congruence	G–SRT.5
Lesson 5	Proving Theorems About Lines and Angles		
	5.5.1	Proving the Vertical Angles Theorem	G–CO.9
	5.5.2	Proving Theorems About Angles in Parallel Lines Cut by a Transversal	G–CO.9

Lesson 6	Proving Theorems About Triangles		
	5.6.1	Proving the Interior Angle Sum Theorem	G–CO.10
	5.6.2	Proving Theorems About Isosceles Triangles	G–CO.10
	5.6.3	Proving the Midsegment of a Triangle	G–CO.10
Lesson 7	5.6.4	Proving Centers of Triangles	G–CO.10
	Proving Theorems About Parallelograms		
Lesson 8	5.7.1	Proving Properties of Parallelograms	G–CO.11
	5.7.2	Proving Properties of Special Quadrilaterals	G–CO.11
	Exploring Trigonometric Ratios		
Lesson 9	5.8.1	Defining Trigonometric Ratios	G–SRT.6
	5.8.2	Exploring Sine and Cosine As Complements	G–SRT.7
Lesson 9	Applying Trigonometric Ratios		
	5.9.1	Calculating Sine, Cosine, and Tangent	G–SRT.8
	5.9.2	Calculating Cosecant, Secant, and Cotangent	G–SRT.8
	5.9.3	Problem Solving with the Pythagorean Theorem and Trigonometry	G–SRT.8
	5.9.4	Proving the Pythagorean Identity	F–TF.8
Unit 6: Circles With and Without Coordinates			
Lesson	Sub-lesson number	Title	Standard(s)
Lesson 1	Introducing Circles		
	6.1.1	Similar Circles and Central and Inscribed Angles	G–C.1 G–C.2
	6.1.2	Chord Central Angles Conjecture	G–C.2
	6.1.3	Properties of Tangents of a Circle	G–C.2
Lesson 2	Inscribed Polygons and Circumscribed Triangles		
	6.2.1	Constructing Inscribed Circles	G–C.3
	6.2.2	Constructing Circumscribed Circles	G–C.3
Lesson 3	6.2.3	Proving Properties of Inscribed Quadrilaterals	G–C.3
	Constructing Tangent Lines		
Lesson 4	6.3.1	Constructing Tangent Lines	G–C.4 (+)
	Finding Arc Lengths and Areas of Sectors		
	6.4.1	Defining Radians	G–C.5
Lesson 5	6.4.2	Deriving the Formula for the Area of a Sector	G–C.5
	Explaining and Applying Area and Volume Formulas		
Lesson 6	6.5.1	Circumference and Area of a Circle	G–GMD.1
	6.5.2	Volumes of Cylinders, Pyramids, Cones, and Spheres	G–GMD.1 G–GMD.3*
Lesson 7	Deriving Equations		
	6.6.1	Deriving the Equation of a Circle	G–GPE.1
	6.6.2	Deriving the Equation of a Parabola	G–GPE.2
Lesson 7	Using Coordinates to Prove Geometric Theorems About Circles and Parabolas		
	6.7.1	Using Coordinates to Prove Geometric Theorems About Circles and Parabolas	G–GPE.4