

PROGRAM OVERVIEW

Standards Correlations

Each lesson in this program was written specifically to address the North Carolina Standard Course of Study (NCSCOS) for Mathematics. Each unit lists the standards covered in all the lessons, and each lesson lists the standards addressed in that particular lesson. In this section, you'll find a comprehensive list mapping the lessons to the NCSCOS.

As you use this program, you will come across a star symbol (★) included with the standards for some of the lessons and activities. This symbol is explained below.

Symbol: ★

Denotes: Modeling Standards

Modeling is best interpreted not as a collection of isolated topics but rather in relation to other standards. Making mathematical models is a Standard for Mathematical Practice, and specific modeling standards appear throughout the high school standards indicated by a star symbol (★).

From <http://www.walch.com/CCSS/00003>

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NORTH CAROLINA FOUNDATIONS OF MATH 1 STANDARDS CORRELATIONS

Unit 1: Introduction to Functions and Equations

Lesson	Title	Standard(s)
1.1	Support Skill: Creating and Evaluating Inputs and Outputs of Equations	8.F.1
1.2	Domain and Range	F-IF.1
1.3	Support Skill: Verifying Whether Inequalities Are True or False	6.EE.5
1.4	Function Notation and Evaluating Functions	F-IF.2
1.5	Support Skill: Analyzing Situations Involving Linear Equations	8.F.5
1.6	Identifying Key Features of Linear and Exponential Graphs	F-IF.4*, F-IF.5
1.7	Support Skill: Using the Distributive Property	6.EE.3
1.8	Support Skill: Solving Simple Inequalities	7.EE.4b
1.9	Support Skill: Using Properties of Equality to Solve Equations*	8.EE.7b
1.10	Properties of Equality	A-REI.1
1.11	Support Skill: Solving Multi-Step Equations*	8.EE.7b
1.12	Solving Linear Equations	A-REI.3
1.13	Solving Linear Inequalities	A-REI.3
1.14	Solving Linear Inequalities in Two Variables	A-REI.12
1.15	Identifying Terms, Factors and Coefficients	A-SSE.1a*
1.16	Creating Linear Equations in One Variable	A-CED.1*
1.17	Rearranging Formulas	A-CED.4*

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Unit 2: Linear Functions

Lesson	Title	Standard(s)
2.1	Support Skill: Identifying Parts of an Expression	6.EE.2b
2.2	Support Skill: Identifying Linear Relationships*	8.F.4
2.3	ONLINE ONLY: Parts of Expressions	A-SSE.1a*
2.4	Interpreting Linear Expressions	A-SSE.1b*
2.5	Support Skill: Determining the Intercepts of Linear Functions	8.EE.6
2.6	Support Skill: Determining the Slope and y -intercept of a Linear Function	8.F.4
2.7	Support Skill: Graphing Linear Functions from Tables or Equations*	A-CED.2*
2.8	Support Skill: Understanding Slope as a Rate of Change	8.EE.5
2.9	Support Skill: Identifying y -intercepts of Graphs of Functions*	8.EE.6
2.10	Support Skill: Creating Linear Equations to Solve Problems*	A-CED.2*
2.11	Support Skill: Creating and Evaluating Inputs and Outputs of Equations	8.F.1
2.12	Support Skill: Connecting Graphs and Equations of Linear Functions	8.F.3
2.13	Creating Equations from Context	A-CED.2*
2.14	Intersecting Graphs	A-REI.11*
2.15	Solving Systems of Linear Inequalities	A-REI.12
2.16	Support Skill: Verifying Whether Inequalities Are True or False	6.EE.5
2.17	Function Notation and Evaluating Functions	F-IF.2
2.18	Support Skill: Analyzing Situations Involving Linear Equations	8.F.5

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Lesson	Title	Standard(s)
2.19	Key Features of Linear Functions	F-IF.4★
2.20	Identifying Key Features of Linear and Exponential Graphs	F-IF.4★, F-IF.5
2.21	Support Skill: Writing Linear Equations*	8.F.4
2.22	Connecting Graphs and Equations of Linear Functions	F-IF.6★
2.23	Finding the Slope or Rate of Change of Linear Functions	F-IF.6★
2.24	Calculate and Interpret the Average Rate of Change	F-IF.6★
2.25	Comparing Linear Functions	F-IF.9
2.26	Building Functions from Context	F-BF.1a★
2.27	Arithmetic Sequences	F-BF.2★
2.28	Interpreting Parameters	F-LE.5★

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Unit 3: Modeling with Linear Functions

Lesson	Title	Standard(s)
3.1	Support Skill: Writing Linear Equations*	8.F.4
3.2	Recognizing Average Rate of Change	F-LE.1
3.3	Support Skill: Creating a Scatter Plot Given Data in a Table	8.SP.1
3.4	Solving Problems Given Functions Fitted to Data	S-ID.6a*
3.5	Analyzing Residuals	S-ID.6b*
3.6	Support Skill: Identifying Linear Correlations Graphically	8.SP.3
3.7	Analyzing the Slope and y -intercept of Linear Graphs from Data	S-ID.7*
3.8	Support Skill: Creating a Scatter Plot Given Data in a Table	8.SP.1
3.9	Calculating and Interpreting the Correlation Coefficient	S-ID.8*
3.10	Support Skill: Creating a Scatter Plot Given Data in a Table	8.SP.1
3.11	Distinguishing Between Correlation and Causation	S-ID.9*

Unit 4: Connecting Algebra and Geometry on the Coordinate Plane

Lesson	Title	Standard(s)
4.1	Support Skill: Using the Distance Formula with Two Points on the Coordinate Plane	8.G.8
4.2	Support Skill: Calculating Slope*	8.EE.5
4.3	Calculating Perimeter and Area	G-GPE.4
4.4	Working with Parallel and Perpendicular Lines	G-GPE.5
4.5	Finding Midpoints and Endpoints of Line Segments	G-GPE.6

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Unit 5: Exponential Functions

Lesson	Title	Standard(s)
5.1	Support Skill: Understanding the Rules of Exponents, Including Negative Exponents*	8.EE.1
5.2	Applying the Properties of Integer Exponents	N-RN.2
5.3	Interpreting Linear and Exponential Expressions	A-SSE.1a*, A-SSE.1b*
5.4	Creating Exponential Equations	A-CED.1
5.5	Creating and Graphing Exponential Equations	A-CED.2*
5.6	Graphing the Set of All Solutions	A-REI.10
5.7	Intersecting Graphs	A-REI.11*
5.8	Support Skill: Understanding Function Notation, Domain, and Independent and Dependent Variables**	F-IF.1
5.9	Domain and Range of Exponential Functions	F-IF.2
5.10	Sequences As Functions	F-IF.3
5.11	Graphing Exponential Equations in Context	F-IF.4*, F-IF.5*
5.12	Exponential Rate of Change	F-IF.6*
5.13	Graphing Exponential Functions	F-IF.7*
5.14	Analyzing Exponential Functions	F-IF.7*
5.15	Comparing Exponential Functions	F-IF.9
5.16	Building Functions Including Parameters	F-BF.1.1a*, F-LE.5*
5.17	Geometric Sequences	F-BF.2*
5.18	Comparing Linear to Exponential Functions	F-LE.3*
5.19	Fitting Exponential Functions to Data	S-ID.6c*

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Unit 6: Quadratic Functions

Lesson	Title	Standard(s)
6.1	Factoring Expressions by the Greatest Common Factor	A-SSE.3★
6.2	Factoring Expressions with $a = 1$	A-SSE.3★
6.3	Factoring Expressions with $a > 1$	A-SSE.3★
6.4	Polynomial Operations	7.EE.1, 7.EE.2
6.5	Adding and Subtracting Polynomials	A-APR.1
6.6	Multiplying Polynomials	A-APR.1
6.7	ONLINE ONLY: Zero Product Property	A-REI.1
6.8	Creating and Graphing Equations Using Standard Form	A-APR.3, A-SSE.1★
6.9	Creating and Graphing Equations Using the x -intercepts	A-SSE.3★, A-CED.2★
6.10	Solving Quadratic Equations by Factoring	A-SSE.3★, A-CED.1★, A-REI.4
6.11	Taking the Square Root of Both Sides	A-CED.1★, A-REI.4
6.12	Interpreting Various Forms of Quadratic Functions	F-IF.7★, F-IF.8a
6.13	Identifying the Average Rate of Change	F-IF.6★
6.14	Comparing Models	F-IF.9

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Unit 7: Systems of Equations and Inequalities

Lesson	Title	Standard(s)
7.1	Support Skill: Solving Systems of Linear Equations by Algebraic Methods	8.EE.8
7.2	Representing Constraints	A-CED.3*
7.3	Solving Systems of Linear Equations by Graphing	A-REI.5, A-REI.6
7.4	Solving Systems of Linear Equations by Substitution and Elimination	A-REI.5
7.5	Solving Linear Inequalities in Two Variables	A-REI.12
7.6	Solving Systems of Linear Inequalities	A-REI.12

Unit 8: Statistics

Lesson	Title	Standard(s)
8.1	Representing Data Sets	S-ID.1*
8.2	Comparing Data Sets	S-ID.2*
8.3	Interpreting Data Sets	S-ID.3*