

PROGRAM OVERVIEW

Suggested Pacing Guide

Overview

The sub-lessons in this program are designed to be covered over one, two, or three days, depending on the depth and complexity of the lesson. The pacing guide that follows provides *suggested* pacing, but this should be viewed as a flexible guideline only. If students need an extra day to solidify understanding, a one-day lesson may be spread over two days, or a two-day lesson may be spread over three days. Conversely, if students grasp a concept more quickly than suggested by the pacing guide, it is fine to shorten the duration of the lesson and move on to the next lesson.

Each sub-lesson features several components. The estimated time for each component is given in parentheses. Components include: a Warm-Up, Instruction (including an Introduction, Key Concepts, and Guided Practice), a Problem-Based Task, and Practice.

Guided Practice, Scaffolded Practice, and Practice

Each Guided Practice set includes student worksheets. Scaffolded Practice worksheets (the first set of “Printable Practice” worksheets in each lesson) are also included to reinforce key prerequisite skills for the lesson. Each lesson also includes two sets of on-level printable Practice problems, along with an interactive Learnosity version of the first practice set. Guided Practice, Scaffolded Practice, and Practice problems may be assigned for in-class work or homework assignments.

Suggested Progression of One-, Two-, and Three-Day Lessons

One Day

- Warm-Up PowerPoint and Debrief (10 minutes)
- Introduction and Key Concepts (10 minutes)
- One or two Guided Practice Examples, including applets for selected examples as appropriate (15 minutes)
- Problem-Based Task and discussion (30 minutes)
- Homework: Practice problems

Two Days

Day 1

- Warm-Up PowerPoint and Debrief (10 minutes)
- Introduction and Key Concepts (15 minutes)
- Two or three Guided Practice Examples, including applets for selected examples as appropriate (20 minutes)
- In-class practice: selected Practice A problems (20 minutes)
- Homework: the remainder of Practice A

PROGRAM OVERVIEW

Suggested Pacing Guide

Day 2

- Review Practice problems (10 minutes)
- One or two remaining Guided Practice Examples, including applets for selected examples as appropriate (15 minutes)
- Problem-Based Task and discussion (30 minutes)
- In-class practice: selected Practice B problems (15 minutes)
- Homework: the remainder of Practice B

Three Days

Day 1

- Warm-Up PowerPoint and Debrief (10 minutes)
- Introduction and Key Concepts (25 minutes)
- One or two Guided Practice Examples, including applets for selected examples as appropriate (15 minutes)
- Homework: selected Practice A problems

Day 2

- Review Practice problems (15 minutes)
- Two or three remaining Guided Practice Examples, including applets for selected examples as appropriate (15 minutes)
- Problem-Based Task and discussion (20 minutes)
- Homework: the remainder of the Practice A problems

Day 3

- Review Practice problems (15 minutes)
- In-class practice: selected Practice B problems (35 minutes)
- Homework: the remainder of the Practice B problems

PROGRAM OVERVIEW

Suggested Pacing Guide

Assessments, Conceptual Activities, and Station Activities

Each lesson includes a Pre-Assessment and a Progress Assessment, and each unit concludes with a Unit Assessment. Units also feature sets of Station Activities, along with links to interactive web-based Conceptual Activities, to complement instruction.

Pre-Assessments are short, multiple-choice assessments with five problems, designed to evaluate prior knowledge of the upcoming concepts in the lesson. These are brief and should not factor into a student's grade.

Progress Assessments include 10 multiple-choice problems and one extended-response problem. Progress Assessments may not take an entire class period. The additional time may be used to review before the assessment, work through the Conceptual Activities, or to begin the next lesson after the assessment.

Unit Assessments include 12 multiple-choice problems and three extended-response problems, and generally require a full class period.

Conceptual Activities are digital math resources that allow students to explore mathematical ideas with engaging, real-world problems and interactive games.

Station Activities generally require a full class period for the students to rotate through each station and then to engage in a class discussion at the end.

PROGRAM OVERVIEW

Suggested Pacing Guide

Unit 1: Relationships Between Quantities (24 Days)

Unit Overview: This unit begins with students exploring the relationships between the parts that make up an expression. This leads into using individual expressions to write equations in one variable, then in two variables. Finally, students work with formulas that have multiple variables. This unit begins with definitions, calculations, and graphing, and progresses in depth to reasoning abstractly with variables instead of numbers while still applying mathematical concepts.

Lesson 1: Interpreting Structure in Expressions

Before embarking on an in-depth study of mathematics, students must have a common language for and understanding of how expressions are created, modified, and simplified. In this lesson, students reexamine the terminology used in discussing the fundamental elements of algebra. With this common language, students go on to explore how an expression is affected when its smaller elements are changed. This is the foundation of modeling in algebra—using and manipulating expressions to describe contexts. This lesson lays the groundwork for the rest of the unit, which builds on this common terminology.

Day	Area of study/content	Homework/Practice	Standard(s)
Day 1 Day 2	Lesson 1 Pre-Assessment 1.1.1: Identifying Terms, Factors, and Coefficients	Practice A or B	A–SSE.1a★
Day 3	1.1.2: Interpreting Linear and Exponential Expressions	Practice A or B	A–SSE.1b★
Day 4	Lesson 1 Progress Assessment Lesson 2 Pre-Assessment	Practice A or B	

Lesson 2: Creating Equations and Inequalities in One Variable

From expressions, students go on to create linear equations and inequalities in one variable that model real-world situations. Students gain practice with translating contexts into symbolic representations by writing linear equations and using these equations to solve problems. Similarly, students build upon these skills as they learn how to identify and translate simple exponential contexts into exponential equations that can be solved. This lesson provides a foundation for working with linear and exponential equations in two variables as seen in the next lesson, and for exploring equations in multiple variables as encountered.

Day	Area of study/content	Homework/Practice	Standard(s)
Day 5	Station Activities Set: Ratios and Proportions	Practice A or B	N–Q.1★ A–CED.1★

PROGRAM OVERVIEW

Suggested Pacing Guide

Day 6 Day 7	1.2.1: Creating Linear Equations in One Variable	Practice A or B	A–CED.1★ N–Q.2★ N–Q.3★
Day 8	1.2.2: Creating Linear Inequalities in One Variable	Practice A or B	A–CED.1★
Day 9 Day 10	1.2.3: Creating Exponential Equations	Practice A or B	A–CED.1★
Day 11	Station Activities Set: Solving Inequalities	Practice A or B	A–CED.1★
Day 12	Lesson 2 Progress Assessment Lesson 3 Pre-Assessment	Practice A or B	

Lesson 3: Creating and Graphing Equations in Two Variables

Students extend their understanding of linear and exponential equations to include equations in two variables. Students see that equations in two variables can be graphed. Students learn to set up a coordinate plane with appropriate axes, scales, and labels, which prepares them for graphing in the remainder of the course and throughout their studies in mathematics.

Day	Area of study/content	Homework/Practice	Standard(s)
Day 13 Day 14	1.3.1: Creating and Graphing Linear Equations in Two Variables	Practice A or B	A–CED.2★ N–Q.1★
Day 15 Day 16	1.3.2: Creating and Graphing Exponential Equations	Practice A or B	A–CED.2★ N–Q.1★
Day 17	Lesson 3 Progress Assessment Lesson 4 Pre-Assessment	Practice A or B	

Lesson 4: Representing Constraints

Students learn that equations and inequalities can have restrictions, and that solutions may be valid under only certain conditions. This shows students that even though a solution “works” mathematically, it might not be reasonable for the given set of equations or inequalities that arise from a context. This lesson provides the basis for building functions from context and understanding domain and range, which are presented later in the course.

Day	Area of study/content	Homework/Practice	Standard(s)
Day 18	1.4.1: Representing Constraints	Practice A or B	A–CED.3★
Day 19	Lesson 4 Progress Assessment	Practice A or B	

PROGRAM OVERVIEW

Suggested Pacing Guide

Lesson 5: Rearranging Formulas

In this lesson, students use what they have learned about solving equations to rearrange an equation that contains several variables in order to solve it for a given variable.

Day	Area of study/content	Homework/Practice	Standard(s)
Day 20	Lesson 5 Pre-Assessment	Practice A or B	A–CED.4★
Day 21	1.5.1: Rearranging Formulas		
Day 22	Lesson 5 Progress Assessment	Practice A or B	
Day 23	Station Activities Set: Solving Equations	Practice A or B	A–CED.1★ A–CED.2★
Unit Assessment			
Day 24	Unit Assessment		

PROGRAM OVERVIEW

Suggested Pacing Guide

Unit 2: Linear and Exponential Relationships (59 days)

Unit Overview: This unit builds on the concepts of functions that were first introduced in Grade 8. Students extend their understanding of functions to include exponential relationships. Students learn how to analyze and model relationships from contexts, graphs, tables, and equations using what they know about exponential and linear relationships.

Lesson 1: Graphs As Solution Sets and Function Notation

Students investigate the concept of a graph as representing the solution set to an equation in two variables. To describe that graph, students are introduced to using function notation, evaluating functions, identifying domain and range, and analyzing the graphs of two functions that meet at one or more points. This lesson serves to familiarize students with the language and behavior of functions and how to distinguish them from relations. These notions serve as the basis for the remainder of the unit, as students go on to study functions in greater depth.

Day	Area of study/content	Homework/Practice	Standard(s)
Day 1	Lesson 1 Pre-Assessment	Practice A or B	A–REI.10
Day 2	2.1.1: Graphing the Set of All Solutions		
Day 3	2.1.2: Intersecting Graphs	Practice A or B	A–REI.11★
Day 4			
Day 5	2.1.3: Domain and Range	Practice A or B	F–IF.1
Day 6			
Day 7	2.1.4: Function Notation and Evaluating Functions	Practice A or B	F–IF.2
Day 8			
Day 9	Station Activities Set: Relations Versus Functions/Domain and Range	Practice A or B	F–IF.1 F–IF.2 F–BF.1a★
Day 10	Lesson 1 Progress Assessment Lesson 2 Pre-Assessment	Practice A or B	

PROGRAM OVERVIEW

Suggested Pacing Guide

Lesson 2: Solving Linear Inequalities in Two Variables and Systems of Inequalities

Students build on their knowledge of graphs as solutions to equations, and understand the concept that the solution to an inequality is a half plane. Similar to systems of equations, systems of inequalities are used to find the set of points that are valid for both inequalities. Students learn how to graph the solution set of a system of inequalities in two variables.

Day	Area of study/content	Homework/Practice	Standard(s)
Day 11 Day 12 Day 13	2.2.1: Solving Linear Inequalities in Two Variables	Practice A or B	A–REI.12
Day 14 Day 15 Day 16	2.2.2: Solving Systems of Linear Inequalities	Practice A or B	A–REI.12
Day 17	Lesson 2 Progress Assessment Lesson 3 Pre-Assessment	Practice A or B	

Lesson 3: Sequences As Functions

Students learn what a sequence is and how a sequence can be described as a function either recursively or explicitly. This continues to reinforce the students' comprehension of linear and exponential relationships, and prepares them for studying arithmetic and geometric sequences.

Day	Area of study/content	Homework/Practice	Standard(s)
Day 18 Day 19 Day 20	2.3.1: Sequences As Functions	Practice A or B	F–IF.3
Day 21	Lesson 3 Progress Assessment Lesson 4 Pre-Assessment	Practice A or B	

Lesson 4: Interpreting Graphs of Functions

Students learn the vocabulary used to describe functions and develop their understanding of this terminology in context. Students learn what to look for when analyzing a function in terms of its graph and the context of the situation that the graph depicts.

Day	Area of study/content	Homework/Practice	Standard(s)
Day 22 Day 23 Day 24	2.4.1: Identifying Key Features of Linear and Exponential Graphs	Practice A or B	F–IF.4★ F–IF.5★
Day 25 Day 26	2.4.2: Average Rate of Change	Practice A or B	F–IF.6★ F–LE.1a★

PROGRAM OVERVIEW

Suggested Pacing Guide

Day 27 Day 28	2.4.3: Recognizing Average Rate of Change	Practice A or B	F-IF.6★ F-LE.1b★ F-LE.1c★
Day 29	Lesson 4 Progress Assessment Lesson 5 Pre-Assessment	Practice A or B	

Lesson 5: Analyzing Linear and Exponential Functions

Students learn how to graph linear and exponential functions, as well as how to identify the intercepts and asymptotes (for exponential functions). This lays the foundation for comparing the attributes of two functions.

Day	Area of study/content	Homework/Practice	Standard(s)
Day 30 Day 31	2.5.1: Graphing Linear Functions	Practice A or B	F-IF.7a★
Day 32 Day 33	2.5.2: Graphing Exponential Functions	Practice A or B	F-IF.7e★
Day 34	Station Activities Set: Comparing Exponential Models	Practice A or B	F-IF.2 F-IF.7d★ (+) F-IF.7e★
Day 35	Lesson 5 Progress Assessment Lesson 6 Pre-Assessment	Practice A or B	

Lesson 6: Comparing Functions

Students compare attributes of linear functions and then exponential functions that are presented in different ways; i.e., as tables, graphs, and/or equations. Then, students analyze linear functions and compare them to exponential functions. This skill prepares students for building functions from real-world contexts in the next lesson.

Day	Area of study/content	Homework/Practice	Standard(s)
Day 36	2.6.1: Comparing Linear Functions	Practice A or B	F-IF.9
Day 37	2.6.2: Comparing Exponential Functions	Practice A or B	F-IF.9
Day 38	2.6.3: Comparing Linear to Exponential Functions	Practice A or B	F-LE.3★
Day 39	Lesson 6 Progress Assessment Lesson 7 Pre-Assessment	Practice A or B	

PROGRAM OVERVIEW

Suggested Pacing Guide

Lesson 7: Building Functions

Students create linear and exponential equations to model the relationship between two quantities given a context, a graph, or a table of values. This readies students to operate on functions by using transformations.

Day	Area of study/content	Homework/Practice	Standard(s)
Day 40 Day 41	2.7.1: Building Functions from Context	Practice A or B	F–BF.1a★
Day 42 Day 43	2.7.2: Constructing Functions from Graphs and Tables	Practice A or B	F–LE.2★
Day 44	Lesson 7 Progress Assessment Lesson 8 Pre-Assessment	Practice A or B	

Lesson 8: Operating on Functions and Transformations

Students perform operations with functions and then analyze the effects of vertical translations on linear and exponential functions. This experience allows students to perform more complex operations and transformations in later units.

Day	Area of study/content	Homework/Practice	Standard(s)
Day 45	2.8.1: Operating on Functions	Practice A or B	F–BF.1b★
Day 46	2.8.2: Transformations of Linear and Exponential Functions	Practice A or B	F–BF.3
Day 47	Station Activities Set: Interpreting Exponential Functions	Practice A or B	F–IF.2 F–IF.7e★
Day 48	Lesson 8 Progress Assessment Lesson 9 Pre-Assessment	Practice A or B	

PROGRAM OVERVIEW

Suggested Pacing Guide

Lesson 9: Arithmetic and Geometric Sequences

Students build on their earlier work with sequences as functions to extend, create, and analyze arithmetic and geometric sequences.

Day	Area of study/content	Homework/Practice	Standard(s)
Day 49 Day 50	2.9.1: Arithmetic Sequences	Practice A or B	F–BF.2★
Day 51 Day 52	2.9.2: Geometric Sequences	Practice A or B	F–BF.2★
Day 53	Station Activities Set: Sequences	Practice A or B	F–BF.2★ F–LE.2★
Day 54	Lesson 9 Progress Assessment Lesson 10 Pre-Assessment	Practice A or B	

Lesson 10: Interpreting Parameters

Students understand the impact of changing the parameters of linear equations in slope-intercept form and exponential functions in general form. They examine how those parameters relate to the context of the problem, the graph, and the equation.

Day	Area of study/content	Homework/Practice	Standard(s)
Day 55 Day 56	2.10.1: Interpreting Parameters	Practice A or B	F–LE.5★
Day 57	Lesson 10 Progress Assessment	Practice A or B	
Day 58	Station Activities Set: Comparing Linear Models	Practice A or B	A–CED.2★ A–REI.10 A–REI.11★ F–IF.7a★
Unit Assessment			
Day 59	Unit Assessment		

PROGRAM OVERVIEW

Suggested Pacing Guide

Unit 3: Reasoning with Equations (23 Days)

Unit Overview: This unit combines the terminology developed in Unit 1 with the algebraic skills learned in Unit 2 to guide students to solve more challenging linear equations, pushing them beyond the two-step equations that were first learned in Grade 8. Students also extend what they know about linear equations and apply this understanding toward solving linear inequalities. The unit then delves deeper into linear equations by exploring how systems of linear equations are constructed, solved, and graphed.

Lesson 1: Solving Equations and Inequalities

Students further develop their ability to solve linear equations by solving equations of greater difficulty. Afterward, students go on to solve linear inequalities and exponential equations.

Day	Area of study/content	Homework/Practice	Standard(s)
Day 1	Lesson 1 Pre-Assessment	Practice A or B	A–REI.1
Day 2	3.1.1: Properties of Equality		
Day 3	3.1.2: Solving Linear Equations	Practice A or B	A–REI.3
Day 4			
Day 5			
Day 6	3.1.3: Solving Linear Inequalities	Practice A or B	A–REI.3
Day 7			
Day 8			
Day 9	3.1.4: Solving Exponential Equations	Practice A or B	A–REI.3
Day 10			
Day 11			
Day 12	Lesson 1 Progress Assessment Lesson 2 Pre-Assessment	Practice A or B	

PROGRAM OVERVIEW

Suggested Pacing Guide

Lesson 2: Solving Systems of Equations

This lesson develops students' previous work with systems of equations first learned in Grade 8. Students explore three methods for solving systems of equations: by substitution, by elimination, and by graphing. Students develop their understanding of how to write a system of equations and what the solution means in terms of the context of the problem.

Day	Area of study/content	Homework/Practice	Standard(s)
Day 13 Day 14 Day 15	3.2.1: Solving Systems of Linear Equations by Substitution and Elimination	Practice A or B	A-REI.5
Day 16	Station Activities Set: Solving Systems by Substitution and Elimination	Practice A or B	A-REI.5
Day 17	Station Activities Set: Solving Systems by Graphing	Practice A or B	A-REI.6
Day 18 Day 19 Day 20	3.2.2: Solving Systems of Linear Equations by Graphing	Practice A or B	A-REI.6
Day 21	Station Activities Set: Using Systems in Applications	Practice A or B	A-CED.2★ A-CED.3★ A-REI.5 A-REI.6 A-REI.11★
Day 22	Lesson 2 Progress Assessment	Practice A or B	
Unit Assessment			
Day 23	Unit Assessment		

PROGRAM OVERVIEW

Suggested Pacing Guide

Unit 4: Descriptive Statistics (27 Days)

Unit Overview: This unit develops students’ skills and understanding of how to represent, compare, and analyze data using mathematical techniques and terminology. Students move from making statements based on inspection to drawing conclusions based on mathematics. Students begin by analyzing single-count variables, and move toward analyzing multiple variables and two-way frequency tables. Students continuously practice analyzing data sets in context by describing and interpreting the sets using measures of center and spread, and later incorporate any deviations. Students also learn how to fit linear models to data and use these models to evaluate and make predictions.

Lesson 1: Working with a Single Measurement Variable

Students learn how to represent quantitative data using histograms, dot plots, and box-and-whisker plots. Students also learn how to use the graphical representations they create from data sets to analyze the data. This lesson serves as the foundation for describing and analyzing data sets—skills that will be carried through the remainder of this unit and into data analysis units in future math courses.

Day	Area of study/content	Homework/Practice	Standard(s)
Day 1	Lesson 1 Pre-Assessment	Practice A or B	S-ID.1★
Day 2	4.1.1: Representing Data Sets		
Day 3	4.1.2: Comparing Data Sets	Practice A or B	S-ID.2★
Day 4			
Day 5	4.1.3: Interpreting Data Sets	Practice A or B	S-ID.3★
Day 6			
Day 7	Station Activities Set: Displaying and Interpreting Data	Practice A or B	S-ID.1★ S-ID.2★ S-ID.3★
Day 8	Lesson 1 Progress Assessment Lesson 2 Pre-Assessment	Practice A or B	

Lesson 2: Working with Two Categorical and Quantitative Variables

Students move from analyzing single-count variables to analyzing multiple variables in a two-way frequency table. Then, students learn how to examine the relationship between two variables by plotting the data points and fitting curves to the data. Students come to understand that when a relationship between two variables exists, the data are correlated, and the relationship is not necessarily causal. This lesson prepares students to further investigate linear models.

Day	Area of study/content	Homework/Practice	Standard(s)
Day 9	4.2.1: Summarizing Data Using Two-Way Frequency Tables	Practice A or B	S-ID.5★
Day 10			

PROGRAM OVERVIEW

Suggested Pacing Guide

Day 11 Day 12	4.2.2: Solving Problems Given Functions Fitted to Data	Practice A or B	S-ID.6a★
Day 13 Day 14	4.2.3: Analyzing Residuals	Practice A or B	S-ID.6b★
Day 15 Day 16 Day 17	4.2.4: Fitting Linear Functions to Data	Practice A or B	S-ID.6c★
Day 18	Station Activities Set: Line of Best Fit	Practice A or B	S-ID.6a★ S-ID.6b★ S-ID.6c★ S-ID.7★
Day 19	Lesson 2 Progress Assessment Lesson 3 Pre-Assessment	Practice A or B	

Lesson 3: Interpreting Linear Models

Students delve deeper into analysis and interpretation of linear models. They also examine the strength of a linear model by exploring the correlation coefficient. Students learn the difference between correlation and causation.

Day	Area of study/content	Homework/Practice	Standard(s)
Day 20 Day 21	4.3.1: Interpreting Slope and y -intercept	Practice A or B	S-ID.7★
Day 22 Day 23	4.3.2: Calculating and Interpreting the Correlation Coefficient	Practice A or B	S-ID.8★
Day 24 Day 25	4.3.3: Distinguishing Between Correlation and Causation	Practice A or B	S-ID.9★
Day 26	Lesson 3 Progress Assessment	Practice A or B	
Unit Assessment			
Day 27	Unit Assessment		

PROGRAM OVERVIEW

Suggested Pacing Guide

Unit 5: Congruence, Proof, and Constructions (34 Days)

Unit Overview: This unit further develops the concept of transformations presented to students in Grade 8 by applying transformations to functions. The unit also introduces students to geometric constructions in order to show the relationships between lines and angles. Students continue to develop their understanding of these relationships as they explore the concepts of congruency and congruent triangles. Throughout the unit, students are asked to prove relationships that exist in geometric figures using theorems and postulates.

Lesson 1: Introducing Transformations

Students begin the lesson by being introduced to the language of geometry. This language is the foundation of the unit. Students then apply this terminology to connect algebra and geometry through the examination of transformations as they relate to functions. Students take the familiar topic of symmetry and learn to visualize applying lines of symmetry to verbal descriptions of geometric figures. These concepts serve as a springboard for further developing the concepts of reflections, rotations, and congruency presented.

Day	Area of study/content	Homework/Practice	Standard(s)
Day 1	Lesson 1 Pre-Assessment	Practice A or B	G–CO.1
Day 2	5.1.1: Defining Terms		
Day 3	5.1.2: Transformations As Functions	Practice A or B	G–CO.2
Day 4			
Day 5	5.1.3: Applying Lines of Symmetry	Practice A or B	G–CO.3
Day 6			
Day 7	Lesson 1 Progress Assessment Lesson 2 Pre-Assessment	Practice A or B	

Lesson 2: Defining and Applying Rotations, Reflections, and Translations

Students take the general concepts of symmetry and transformations learned in the previous lesson and apply specific rotations, reflections, and translations in a given order. Students explore the order of transformations, and verify that the order is important. Students see that these rigid transformations allow the figures to be manipulated back onto themselves while remaining congruent. This lesson sets the stage for exploring congruent triangles.

Day	Area of study/content	Homework/Practice	Standard(s)
Day 8	5.2.1: Defining Rotations, Reflections, and Translations	Practice A or B	G–CO.4
Day 9	5.2.2: Applying Rotations, Reflections, and Translations	Practice A or B	G–CO.5
Day 10			
Day 11	Lesson 2 Progress Assessment Lesson 3 Pre-Assessment	Practice A or B	

PROGRAM OVERVIEW

Suggested Pacing Guide

Lesson 3: Constructing Lines, Segments, and Angles

Students begin by constructing copies of segments and angles without measuring them. Students explore the relationships within constructions using only a compass and a straightedge. This lesson helps students begin to examine the spatial relationships in congruency.

Day	Area of study/content	Homework/Practice	Standard(s)
Day 12 Day 13	5.3.1: Copying Segments and Angles	Practice A or B	G–CO.12
Day 14	5.3.2: Bisecting Segments and Angles	Practice A or B	G–CO.12
Day 15	5.3.3: Constructing Perpendicular and Parallel Lines	Practice A or B	G–CO.12
Day 16	Lesson 3 Progress Assessment Lesson 4 Pre-Assessment	Practice A or B	

Lesson 4: Constructing Polygons

Students develop their spatial exploration of geometric figures by inscribing triangles, squares, and regular hexagons in circles. This exploration further prepares students for the study of congruent triangles.

Day	Area of study/content	Homework/Practice	Standard(s)
Day 17 Day 18	5.4.1: Constructing Equilateral Triangles Inscribed in Circles	Practice A or B	G–CO.13
Day 19	5.4.2: Constructing Squares Inscribed in Circles	Practice A or B	G–CO.13
Day 20	5.4.3: Constructing Regular Hexagons Inscribed in Circles	Practice A or B	G–CO.13
Day 21	Lesson 4 Progress Assessment Lesson 5 Pre-Assessment	Practice A or B	

Lesson 5: Exploring Congruence

Students combine their knowledge of transformations from the beginning of the unit with their understanding of congruent angles and segments in order to explore congruent figures. This lesson leads to investigating congruent triangles in the next lesson.

Day	Area of study/content	Homework/Practice	Standard(s)
Day 22 Day 23	5.5.1: Describing Rigid Motions and Predicting the Effects	Practice A or B	G–CO.6
Day 24	5.5.2: Defining Congruence in Terms of Rigid Motions	Practice A or B	G–CO.6

PROGRAM OVERVIEW

Suggested Pacing Guide

Day 25	Station Activities Set: Rotations and Reflections	Practice A or B	G–CO.1 G–CO.3 G–CO.4 G–CO.5
Day 26	Lesson 5 Progress Assessment Lesson 6 Pre-Assessment	Practice A or B	

Lesson 6: Congruent Triangles

Students address one of geometry’s central concepts: congruent triangles. Students learn what attributes triangles must have in order to be congruent. As the lesson progresses, students see what minimum requirements are necessary to determine whether two triangles are congruent, and they understand why these criteria are enough to make the determination.

Day	Area of study/content	Homework/Practice	Standard(s)
Day 27 Day 28	5.6.1: Triangle Congruency	Practice A or B	G–CO.7
Day 29 Day 30 Day 31	5.6.2: Explaining ASA, SAS, and SSS	Practice A or B	G–CO.8
Day 32	Station Activities Set: Corresponding Parts, Transformations, and Proof	Practice A or B	G–CO.1 G–CO.2 G–CO.5 G–CO.6 G–CO.7 G–CO.8
Day 33	Lesson 6 Progress Assessment	Practice A or B	
Unit Assessment			
Day 34	Unit Assessment		

PROGRAM OVERVIEW

Suggested Pacing Guide

Unit 6: Connecting Algebra and Geometry Through Coordinates (12 Days)

Unit Overview: This unit connects the domains of algebra and geometry through coordinate proof.

Lesson 1: Slope and Distance

Students constructed parallel and perpendicular lines in the previous unit. In this lesson, they use those skills to explore how to prove that two lines are parallel or perpendicular using coordinates and algebra.

Day	Area of study/content	Homework/Practice	Standard(s)
Day 1	Lesson 1 Pre-Assessment Station Activities Set: Parallel Lines, Slopes, and Equations	Practice A or B	G–GPE.4 G–GPE.5
Day 2 Day 3	6.1.1: Using Coordinates to Prove Geometric Theorems with Slope and Distance	Practice A or B	G–GPE.4 G–GPE.5
Day 4	Station Activities Set: Coordinate Proof with Quadrilaterals	Practice A or B	G–GPE.4 G–GPE.5
Day 5 Day 6	6.1.2: Working with Parallel and Perpendicular Lines	Practice A or B	G–GPE.5
Day 7	Station Activities Set: Perpendicular Lines	Practice A or B	G–GPE.4 G–GPE.5
Day 8	Lesson 1 Progress Assessment Lesson 2 Pre-Assessment	Practice A or B	

Lesson 2: Lines and Line Segments

Students use the distance formula to calculate the perimeter and area of figures given the coordinates of the vertices of the figures, again connecting algebra and geometry.

Day	Area of study/content	Homework/Practice	Standard(s)
Day 9 Day 10	6.2.1: Calculating Perimeter and Area	Practice A or B	G–GPE.7★
Day 11	Lesson 2 Progress Assessment	Practice A or B	
Unit Assessment			
Day 12	Unit Assessment		