

# Coach® Suite Implementation and Pacing Guide

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**Coach® Suite Implementation and Pacing Guide,**  
**Mathematics, Grade 8** 562NA ISBN: 978-1-62928-928-1

Triumph Learning® 136 Madison Avenue, 7th Floor, New York, NY 10016

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# Program Overview

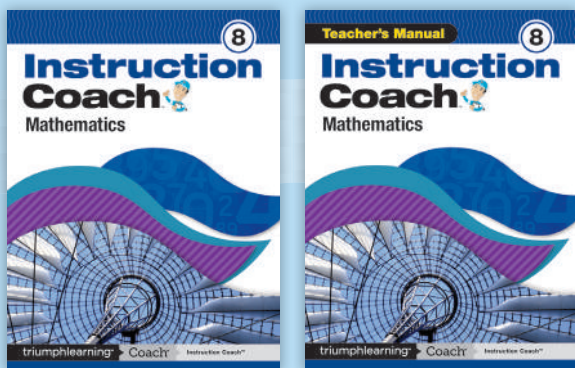
Welcome to Triumph Learning's **Coach Suite Implementation and Pacing Guide!** You have received this guide because you are using one or more of our Coach products: *Instruction Coach*, *Support Coach*, or *Performance Coach*. This guide provides an organizational structure for implementing these products together.

The Coach products are designed to provide a flexible instructional pathway that fits your classroom needs. Use the print and digital components of each product for the blended teaching and learning environment that best suits your teaching style.

## Instruction Coach

*Instruction and Practice*

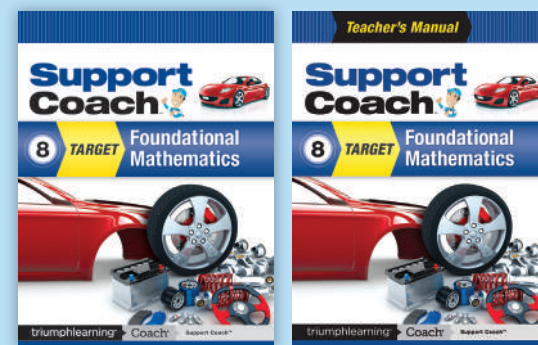
Use **Instruction Coach** as your core instruction.



## Support Coach

*Targeted Instruction and Practice*

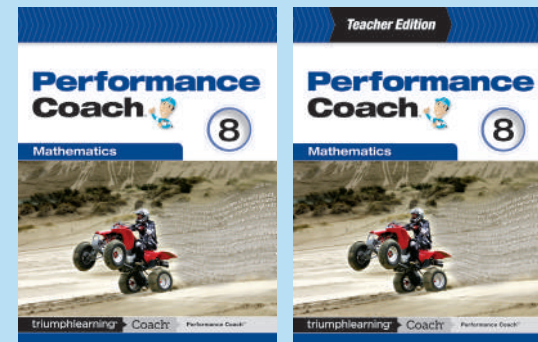
Use **Support Coach** to fill gaps in student understanding with scaffolded instruction.



## Performance Coach

*Reinforcement and Test Preparation*

Use **Performance Coach** to extend understanding for your on-level students and provide practice with a variety of item types.



## The Instructional Pathway

# Digital Options for Blended Learning



## Readiness

*Teacher-driven Practice and Instructional Resources*

**Readiness** is a digital resource library of proven Triumph Learning content. This online library enables teachers to choose among a variety of instructional approaches, guides interactive practice and discussion, assigns independent work that addresses the individual needs of students, and measures student progress with online assessments.

## Waggle

*Student-driven Adaptive Practice and Instruction*

Waggle is Triumph Learning's new interactive learning system where practice meets differentiated learning. This adaptive platform helps teachers to understand student performance in real time, enabling students to be immediately remediated or accelerated to meet their needs. Waggle includes a digital version of the Coach Suite print products.



# Addressing Key Instructional Shifts in Math

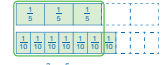
## 1 Greater focus on fewer topics

The Coach Suite provides greater focus in mathematics. The curriculum is centered on the major work at each grade level, and the supporting materials provide resources to deepen the time and energy spent on the major topics. The Pacing Guide on pages 2–33 will help in allotting proper time to the major work.

**LESSON 13 Comparing Fractions**

**UNDERSTAND** Use fraction strips to compare fractions with different denominators.  
Compare  $\frac{3}{5}$  and  $\frac{7}{10}$ .

1 Use fraction strips to show  $\frac{3}{5}$  and  $\frac{7}{10}$ .



The models show that  $\frac{7}{10}$  equals  $\frac{6}{10}$  more than  $\frac{3}{5}$ .

2 Compare the fractions. The whole strips are the same size. The part for  $\frac{3}{5}$  is less than the part for  $\frac{7}{10}$ .  $\frac{3}{5}$  is less than  $\frac{7}{10}$ .  $\frac{3}{5} < \frac{7}{10}$


92 Domain 3: Number and Operations—Fractions

**Instruction Coach**  
*Introduction and Instruction*  
**Focus: 37 standards**  
Full coverage of all standards

**LESSON 11 Comparing Fractions**

**PLUG IN** Comparing Fractions That Have the Same Numerator or Denominator

When comparing fractions, it is important that the wholes are the same size. The fractions  $\frac{4}{8}$  and  $\frac{2}{4}$  have the same **numerator**, but different denominators. The fractions  $\frac{2}{8}$  and  $\frac{2}{4}$  have the same numerator but different denominators.



Four eighths are greater than two eighths. Two eighths are less than two fourths.

**Words to Know**  
**denominator** the bottom number in a fraction that tells how many equal parts  
**numerator** the top number in a fraction that tells how many equal parts are being counted

**DISCUSS** Can you use fractions to compare the size of a slice of an apple to the size of a slice of an orange?  
**Possible answer: No because you are comparing 2 wholes that are different sizes.**

**DO** You can use models to compare fractions with the same denominators. Compare. Write  $<$ ,  $>$ , or  $=$ .

1 The denominators are the same. Both wholes are in sixths. 3 is less than 5. Three sixths is less than five sixths.

2 Compare the numerators to compare the fractions.  $\frac{3}{6} < \frac{5}{6}$

3 Write the correct symbol.  $\frac{3}{6} < \frac{5}{6}$

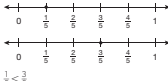
104 LESSON 11

**Support Coach**  
*Scaffolded Instruction*  
**Focus: 20 standards**  
More time and depth on key standards

**LESSON 14 Comparing Fractions**

**GETTING THE IDEA**

There are many ways you can compare two fractions to find which one is greater. When you compare two fractions, the fractions must be from the same whole size.



When the numerators are the same, compare the denominators. The fraction with the lesser denominator is the greater fraction.

When the denominators are the same, compare the numerators. The fraction with the greater numerator is the greater fraction.

**Example 1**  
Compare  $\frac{1}{2}$  and  $\frac{2}{3}$ . Use  $<$ ,  $>$ , or  $=$ .

**Strategy** Write the fractions with common denominators.

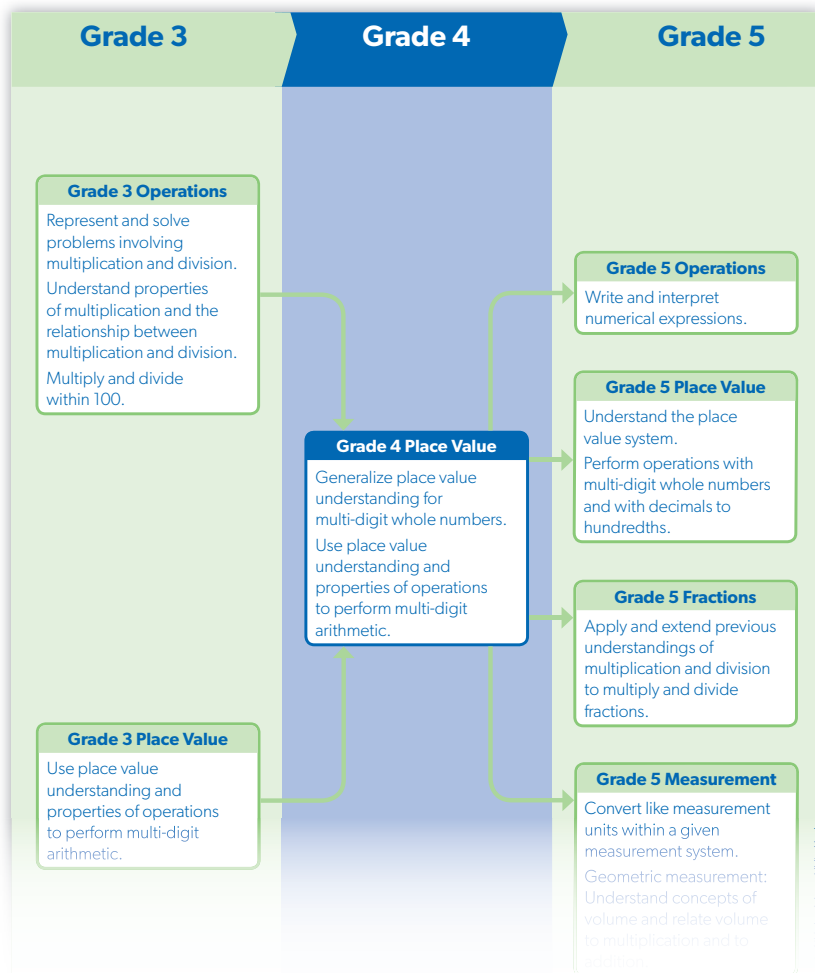
**Step 1** Find a common denominator. Look at the greater denominator. 3 is not a multiple of 2, so 3 cannot be used as a common denominator. Find multiples of 3: 3, 6, 9, ... Multiples of 3: 3, 6, 9, ... Are any of the multiples of 3 also a multiple of 2? 6 is a multiple of 2 because  $2 \times 3 = 6$ . Use 6 as the common denominator.

140 Domain 3: Number and Operations—Fractions

**Performance Coach**  
*Instruction for Review and Reinforcement*  
**Focus: 37 standards**  
Full coverage of all standards

## 2 Coherence: Linking topics and thinking across grades

The Coach Suite is designed to build connections across the grade levels—foundational concepts are introduced at one level and extended and applied in the succeeding levels. These coherent progressions are supported by the structure of Support Coach, which explicitly connects the concepts from one grade level to those at the next grade level.



## 3 Rigor: Pursuit of conceptual understanding, procedural skills and fluency, and application with equal intensity

The Coach Suite has lessons focused on each of the three major emphases in mathematics—concepts, skills, and problem solving/applications.

<b>Lesson 8</b>	<b>Rounding Whole Numbers</b> .....	<b>52</b>
<b>Lesson 9</b>	<b>Adding and Subtracting Whole Numbers</b> .....	<b>58</b>
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Problem Solving Fluency Lesson Performance Task

# Differentiating Learning

One way to differentiate learning in your classroom is to begin a lesson with the Instruction Coach materials. As you assess student needs, you can reach into the Suite for additional resources:



Use **Support Coach** to scaffold instruction for learners who are struggling.



Use **Performance Coach** to reinforce skill development by introducing a variety of different examples and assessment formats.



Use **Waggle** to provide adaptive practice that will individualize the pace at which students master the content.

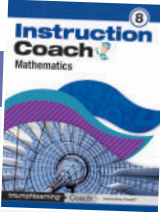




Use **Readiness** to provide above level and below level support and to provide different formats for practice.



# Coach<sup>®</sup> Suite Correlation

The chart below lists skills for the grade level and their correlations to coverage in the Triumph Learning Coach Suite. If you find that students are struggling with a particular skill, look to the lessons indicated in these *Coach* programs for review and remediation.

Grade 8	 Instruction Coach Lesson(s)	 Support Coach Lesson(s)	 Performance Coach Lesson(s)
Skill			
<b>The Number System</b>			
Identify irrational numbers and explain why they are rational and convert decimals into rational numbers	L1	L1	L1
Use rational approximations of irrational numbers to compare sizes of irrational numbers and approximate locations of irrational numbers on number lines	L2	L1	L2
<b>Expressions &amp; Equations</b>			
Know and apply properties of integer exponents to generate equivalent expressions	L3		L3
Evaluate square roots and cube roots of small perfect squares and perfect cubes	L4	L2	L4
Compare two numbers expressed in scientific notation and express how much larger one is than the other	L5	L3	L5
Perform operations with numbers expressed in scientific notation	L6	L3	L6
Graph proportional relationships and compare relationships represented in different ways	L7	L4	L7

<b>Grade 8</b>			
<b>Skill</b>	<b>Instruction Coach Lesson(s)</b>	<b>Support Coach Lesson(s)</b>	<b>Performance Coach Lesson(s)</b>
Use similar triangles to explain why the slope $m$ is the same between any two distinct points on a non-vertical line in a coordinate plane	L8	L5	L8
Give examples of linear equations in one variable with no solution	L9	L6	L9
Solve linear equations with rational number coefficients	L9	L6	L9
Understand that points of intersection on a graph represents a solution to a system of linear equations	L10, L11, L12	L7	L10
Solve systems of two linear equations in two variables algebraically	L10, L11, L12	L7	L11
Solve real-world problems leading to two linear equations in two variables	L10, L11, L12	L7	L11
<b>Functions</b>			
Identify functions	L13	L8	L12
Compare properties of two functions that are represented in different ways	L14	L9	L13
Identify linear functions with equation $y = mx + b$	L15	L8	L14
Construct a function to model a linear relationship between two quantities and interpret rate of change and initial value in terms of situation	L16	L8	L15
Qualitatively describe the functional relationship between two quantities by analyzing a graph	L17	L9	L16



Grade 8			
Skill	Instruction Coach Lesson(s)	Support Coach Lesson(s)	Performance Coach Lesson(s)
<b>Geometry</b>			
Lines are taken to lines of the same length	L18	L10, L11, L12	L17, L18, L19
Angles are taken to angles of the same measure	L18	L10, L11, L12	L17, L18, L19
Parallel lines are taken to parallel lines	L18	L10, L11, L12	L17, L18, L19
Describe a sequence of transformation that exhibits the congruence between two figures	L19	L10, L11, L12, L14	L17, L18, L19, L21
Describe the effects of dilations, rotations, translations and reflections on 2D figures using coordinates	L20, L21	L10, L11, L12, L13	L17-L21
Describe a sequence that exhibits the congruence between two figures	L22	L14	L21
Informally establish facts about angle sums	L23, L24	L15	L22, L23
Explain a proof of the Pythagorean Theorem	L25	L16	L24
Apply the Pythagorean Theorem to determine unknown side lengths in right triangles	L26	L16	L24
Apply the Pythagorean Theorem to find the distance between two points in a coordinate system	L27	L16	L25
Know formula for volume of cylinders and spheres	L28	L17	L26

Grade 8			
Skill	Instruction Coach Lesson(s)	Support Coach Lesson(s)	Performance Coach Lesson(s)
<b>Statistics &amp; Probability</b>			
Construct and interpret scatter plots and describe patterns of association	L29	L18	L27
Draw and interpret line of best fit	L30	L19	L27
Use the equation of a linear model to interpret slope and intercept	L31	L20	L28
Construct and interpret a two-way table	L32		L29

# Using the Pacing Guide

You can use the Math Pacing Guide that follows to plan the delivery of the curriculum over the school year. There are several assumptions built into the Pacing Guide:

- ➔ Priority content requires more time to teach. More time has been allotted in the Pacing Guide for lessons that teach the priority content for your grade level. This will allow you more time to differentiate, go deeper into those topics, and allow students to see the priority standards from different perspectives.
- ➔ The Pacing Guide is designed for a 33-week school year. If your school year is longer or shorter than 33 weeks, you can make adjustments for the difference.
- ➔ Time is included for review and assessment. Review time is scheduled for each domain and for the end of the year.
- ➔ Curriculum mapping decisions should be flexible. The sequence of topics is designed to address all the content of the grade level, but you can re-sequence the content to agree with the curriculum maps used in your state or district. Just remember to allow the amount of time for each lesson that is suggested in the Pacing Guide.
- ➔ Each day is planned around a 40-minute session. The suggested times for the core lesson and the differentiation options will vary, but the sum is always 40 minutes. If your class sessions are longer or shorter than 40 minutes, plan accordingly.

Week 1				
Day 1	Day 2	Day 3	Day 4	Day 5
<b>Domain 1: Ratios and Proportional Relationships</b>				
<b>Instruction Coach</b> <b>Lesson 1: Understanding Ratios</b> <ul style="list-style-type: none"> <li>Teacher's Manual pp. 18–19; 20 min.</li> <li>EL Adaptations Lesson 1</li> </ul> <b>Before the Lesson</b> Ask students to make numerical comparisons of sets in the classroom (tables vs. chairs) and outside of the classroom (e.g., states starting with letter A vs. with the letter N). Speak of the ratio of the two numbers. (4 to 20, tables to chairs). <b>DIFFERENTIATION OPTIONS</b> <ul style="list-style-type: none"> <li>Support Coach Teacher's Manual pp. 26–27 PLUG IN: Build Background; 20 min.</li> <li>Performance Coach Teacher's Edition pp. 2–3 with Getting the Idea section of Student Edition p. 6; 20 min.</li> <li>Readiness</li> </ul>	<b>Instruction Coach</b> <b>Lesson 1: Understanding Ratios</b> <ul style="list-style-type: none"> <li>Teacher's Manual pp. 18–19; 20 min.</li> <li>EL Adaptations Lesson 1</li> </ul> <b>Meaning of Ratio</b> Pay attention (pronunciation, spelling, meaning) to the term ratio. Use the Before the Lesson as an important way to explain concept and language. Add examples. Alert students to Glossary. <b>DIFFERENTIATION OPTIONS</b> <ul style="list-style-type: none"> <li>Support Coach Teacher's Manual pp. 26–27 PLUG IN: Build Background; 20 min.</li> <li>Performance Coach Teacher's Edition pp. 2–3 with Examples 1–2 of Student Edition p. 7; 20 min.</li> <li>Readiness</li> </ul>	<b>Instruction Coach</b> <b>Lesson 1: Understanding Ratios</b> <ul style="list-style-type: none"> <li>Teacher's Manual pp. 18–19; 20 min.</li> <li>EL Adaptations Lesson 1</li> </ul> <b>Understand-Connect</b> Continue with concept and application of ratio, making sure part-to-whole and whole-to-part is understood. <b>DIFFERENTIATION OPTIONS</b> <ul style="list-style-type: none"> <li>Support Coach Teacher's Manual pp. 26–27 for PLUG IN: Model Application; 20 min.</li> <li>Performance Coach Teacher's Edition pp. 2–3 with Example 3 and Coached Example of Student Edition p. 8; 20 min.</li> <li>Readiness</li> </ul>	<b>Instruction Coach</b> <b>Lesson 1: Understanding Ratios</b> <ul style="list-style-type: none"> <li>Teacher's Manual pp. 18–19; 25 min.</li> <li>EL Adaptations Lesson 1</li> </ul> <b>Practice</b> Begin Practice with full class vocalizing and explaining the first 3–4 questions, making sure instructions are clear. Go over the main instructions in the rest of Practice to insure full understanding. Note Observation and Action on the bottom of p. 27 of Common Core Support Coach Teacher's Manual. <b>DIFFERENTIATION OPTIONS</b> <ul style="list-style-type: none"> <li>Support Coach Teacher's Manual pp. 26–27 for PLUG IN: Practice and Assess; 15 min.</li> <li>Performance Coach Teacher's Edition pp. 2–3 with Lesson Practice section of Student Edition pp. 9–12; 15 min or as time permits.</li> <li>Readiness</li> </ul>	<b>Instruction Coach</b> <b>Lesson 2: Understanding Unit Rates</b> <ul style="list-style-type: none"> <li>Teacher's Manual pp. 20–21; 20 min.</li> <li>EL Adaptations Lesson 2</li> </ul> <b>Introduce Unit Rate</b> Review the concept of ratio and add rate and unit rate. Use the Before the Lesson as an important way to explain concept and language. Add examples from students' lives such as goals per game, cost per dollar, etc. Alert students to Glossary. Pay special attention to the advice for EL students on p. 34 of Common Core Support Coach Teacher's Manual. <b>DIFFERENTIATION OPTIONS</b> <ul style="list-style-type: none"> <li>Support Coach Teacher's Manual pp. 34–35 for PLUG IN: Building Background; 20 min.</li> <li>Performance Coach Teacher's Edition pp. 6–7 with Getting the Idea section of Student Edition p. 23; 20 min.</li> <li>Readiness</li> </ul>
<b>Waggle</b>				
<b>Goal Ratios and Rates</b>				<b>Goal Ratios and Rates</b>

Sample page from the Pacing Guide

Day 1

Day 2

Day 3

Day 4

Day 5

► **Domain 1: The Number System**

**LESSON FOCUS**  
**Instruction Coach**

**Lesson 1: Understanding Rational and Irrational Numbers**

- *Student Edition* pp. 6; 20 min.
- *Teacher's Manual* pp. 18–19
- *EL Adaptations Lesson 1*

**Before the Lesson**

Review the different sets of numbers—*whole numbers*, *integers*, *rational numbers*, and *irrational numbers*. Explain how each set is related to each other. Begin UNDERSTAND section as time permits.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 2–3 *PLUG IN: Build Background*. 20 min.
- **Performance Coach Teacher's Edition** pp. 2–3, with *Getting the Idea* section of *Student Edition* p. 6. 20 min.
- **Readiness**

Waggle™

**LESSON FOCUS**  
**Instruction Coach**

**Lesson 1: Understanding Rational and Irrational Numbers**

- *Student Edition* pp. 6–7; 30 min.
- *Teacher's Manual* pp. 18–19
- *EL Adaptations Lesson 1*

**Understand–Connect**

Explain the definitions of the different sets of numbers. Expand on the diagram of the set of *real numbers* shown on the UNDERSTAND page. You can add additional examples that explain the language of the number systems.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 2–3, *PLUG IN: Introduce and Model*. 10 min.
- **Performance Coach Teacher's Edition** pp. 2–3, with *Examples 1–4 and 8* from *Student Edition* pp. 6–7. 10 min.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**

**Lesson 1: Understanding Rational and Irrational Numbers**

- *Student Edition* pp. 8–9; 30 min.
- *Teacher's Manual* pp. 18–19
- *EL Adaptations Lesson 1*

**Example A, Example B, and Example C**

See EL note on p. 2 of *Support Coach Teacher's Manual*. Explain the connection between decimals and fractions. Review the solving of equations. Help students get started with DISCUSS, bottom of Example C.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 4–5, *POWER UP: Introduce and Model*. 10 min.
- **Performance Coach Teacher's Edition** pp. 2–3, with *Examples 5–7 and Coached Example* from *Student Edition* pp. 7–9. 10 min.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**

**Lesson 1: Understanding Rational and Irrational Numbers**

- *Student Edition* pp. 10–11; 30 min.
- *Teacher's Manual* pp. 18–19
- *EL Adaptations Lesson 1*

**Practice**

See EL note on p. 4 of *Support Coach Teacher's Manual*. Make sure each section of Practice is clear.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 6–7, *READY TO GO: Practice and Assess*. 10 min.
- **Performance Coach Teacher's Edition** pp. 2–3, with *Practice* section of *Student Edition* pp. 10–13. 10 min or as time permits.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**

**Lesson 2: Estimating the Value of Irrational Expressions**

- *Student Edition* p. 12; 20 min.
- *Teacher's Manual* pp. 20–21
- *EL Adaptations Lesson 2*

**Before the Lesson**

Briefly review the concepts from Lesson 1. Then carefully explain the discussion about why the squares of 2 and 3 are the two integers that will get the approximation started in the Before The Lesson. Choosing the right integers to approximate can save a great deal of time. Calculators are essential throughout this Lesson. Begin UNDERSTAND section as time permits.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 8–9, *READY TO GO: Build Background*. 20 min.
- **Performance Coach Teacher's Edition** pp. 4–5, with *Getting the Idea* section of *Student Edition* p. 14. 20 min.
- **Readiness**

► **Goal** Rational and Irrational Numbers

► **Goal** Approximations of Irrational Numbers

**Day 1**

**Day 2**

**Day 3**

**Day 4**

**Day 5**

► **Domain 1: The Number System**

**LESSON FOCUS**  
**Instruction Coach**  
**Lesson 2: Estimating the Value of Irrational Expressions**

- *Student Edition* pp.12; 25min.
- *Teacher's Manual* pp. 20–21
- *EL Adaptations Lesson 2*

**Understand**  
 Carefully explain the discussion in Connect about why the squares of 3.4 and 3.5 were chosen in the Before The Lesson. Choosing the right decimals to approximate can save a great deal of time. Calculators are essential.

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**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 8–9, *READY TO GO: Introduce and Model*. 15 min.
- **Performance Coach Teacher's Edition** pp. 4–5, with *Examples* section of *Student Edition* pp. 14–15. 15 min.
- **Readiness**

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**Waggle™**

**LESSON FOCUS**  
**Instruction Coach**  
**Lesson 2: Estimating the Value of Irrational Expressions**

- *Student Edition* pp.13; 25 min.
- *Teacher's Manual* pp. 20–21
- *EL Adaptations Lesson 2*

**Connect**  
 Discuss why 2 and 3 are chosen; also discuss why the sequence in Step 2 begins with 2.6. Make sure all language here is clear. See useful EL note on p. 6 of *Support Coach Teacher's Manual*.

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**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 8–9, *READY TO GO: Work Together (A,B)*. 15 min.
- **Performance Coach Teacher's Edition** pp. 4–5, with *Examples* section and *Coached Example* of *Student Edition* pp. 16–18. 15 min.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**  
**Lesson 2: Estimating the Value of Irrational Expressions**

- *Student Edition* pp. 14–15; 30 min.
- *Teacher's Manual* pp. 20–21
- *EL Adaptations Lesson 2*

**Practice**  
 Begin Practice by explaining what is required for each section. Use your calculator as often as you need to. The Observation–Action chart on SE p. 9 should help detect problems and help solve them.

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**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 10–11, *READY TO GO: Support Independent Practice*. *Extra challenges: see Questions 18 and 19 on p. 15 of Instruction Coach Student Edition*. 10 min.
- **Performance Coach Teacher's Edition** pp. 4–5, with *Practice* section of *Student Edition* pp. 19–22. 10 min or as time permits.
- **Readiness**

**REVIEW AND ASSESS**  
**Instruction Coach**  
**Domain 1 Review**

- *Student Edition* pp. 16–17; 40 min.
- *Teacher's Manual*

**Review Part 1**  
 Go over the Questions 1–20 and discuss. Ask students to take a look at instructions for the first half of the Review on SE pp. 16–17. Make sure all instructions are clear. See Progression Chart on TM pp. 16–17 for a view of progressions connecting the lessons of Domain 1.

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**DIFFERENTIATION OPTIONS**

- **Performance Coach Teacher's Edition** p. 6, with *Domain 1 Review* section of *Student Edition* pp. 23–25 as time permits.

**REVIEW AND ASSESS**  
**Instruction Coach**  
**Domain 1 Review**

- *Student Edition* pp. 18–19; 40 min.
- *Teacher's Manual* p. 91

**Review Part 2 and Performance Task**  
 Go over Questions 21–34 and discuss. Pay special attention to the Performance Task on SE p. 19. Ask students to take a look at instructions for the second half of the Review, Questions 21–34 on SE p. 18. In particular, clarify any doubts with respect to Performance Task (*Approximating Circumference*) on p. 19. See Progression Chart on TM pp. 16–17 for a view of progressions connecting the lessons of Domain 1.

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**DIFFERENTIATION OPTIONS**

Extra challenge: Questions 33 and 34 on p 18 of *Instruction Coach Student Edition*.

- **Performance Coach Teacher's Edition** p. 6, with *Domain 1 Review* section of *Student Edition* pp. 26–28 as time permits.

► **Goal** Exponents and Roots

Day 1

Day 2

Day 3

Day 4

Day 5

► Domain 1

► Domain 2: Expressions and Equations

**REVIEW AND ASSESS**  
**Instruction Coach**  
**Domain 1 Assessment**

- Assessments pp. 4–11; 40 min.
- Assessments Answer Key pp. 4–5

**Assessment**

Have students complete Questions 1–20. Provide extra time for assessments and provide readers to read word problems to students.

**DIFFERENTIATION OPTIONS**

Provide extra time and assistance for students who qualify. Since Domain 1 is only two lessons, Domain 1 Assessment is short and takes only one day. All other Domain Assessments take two days.

**LESSON FOCUS**  
**Instruction Coach**  
**Lesson 3: Applying Properties of Exponents**

- Student Edition p. 22; 25 min.
- Teacher's Manual pp. 24–25
- EL Adaptations Lesson 3

**Before the Lesson**

Make sure to reinforce the two words base and exponent asking students to show examples of each one. Introduce top example of UNDERSTAND section.

**DIFFERENTIATION OPTIONS**

**Understanding Exponentiation** Break down all exponential expressions to their meaning, e.g.,  $7^3 = 7 \times 7 \times 7$ ; and start with repeated multiplication to write an exponential expression, e.g.,  $2 \times 2 \times 2 \times 2 \times 2 \times 2 = 2^6$ . 15 min.

- **Performance Coach Teacher's Edition** pp. 8–9, with *Getting the Idea* section of Student Edition p. 30 before the grey boxes. 15 min.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**  
**Lesson 3: Applying Properties of Exponents**

- Student Edition p. 22; 30 min.
- Teacher's Manual pp. 24–25
- EL Adaptations Lesson 3

**Understand**

Finish UNDERSTAND, SE p. 22.

**DIFFERENTIATION OPTIONS**

**Exponent Expression Cards** Hand out index cards with a variety of exercises about positive and negative exponents, working both ways from expression to multiplication/division and reverse. If these are ordered in some way by difficulty then they can serve to advance students from easier to more difficult computations and understandings. 10 min.

- **Performance Coach Teacher's Edition** pp. 8–9, with Student Edition pp. 30–31 grey boxes and examples 1–2. 10 min.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**  
**Lesson 3: Applying Properties of Exponents**

- Student Edition p. 23; 25 min.
- Teacher's Manual pp. 24–25
- EL Adaptations Lesson 3

**Connect**

The Connect page shows the rules of multiplying and dividing two exponential expressions that have the same bases. Explain these carefully.

**DIFFERENTIATION OPTIONS**

**Exponent Expression Cards** Hand out index cards with a variety of exercises applying the rules for multiplying and dividing exponential expressions. If ordered in some way by difficulty then these cards can serve to advance students from easier to more difficult computations and understandings. 15 min.

- **Performance Coach Teacher's Edition** pp. 8–9, with Student Edition pp. 32–35 grey boxes and examples 3–7. 15 min.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**  
**Lesson 3: Applying Properties of Exponents**

- Student Edition pp. 24–25; 30 min.
- Teacher's Manual pp. 24–25
- EL Adaptations Lesson 3

**Practice**

Every section here needs to be clearly understood even if the problems look simple. They are not.

**DIFFERENTIATION OPTIONS**

**Check Understanding**

Choose odd questions and ask students to explain how they got their answers to these. This will allow for an opportunity to see how much understanding students have of what looks like a set of easy questions. Extra challenge: Questions 27 and 28. p. 25 of *Instruction Coach Student Edition*. 10 min.

- **Performance Coach Teacher's Edition** pp. 8–9, with *Lesson Practice* of Student Edition pp. 38–41. 10 min or as time permits.
- **Readiness**

Waggle™

► Goal Exponents and Roots

**Day 1**

**Day 2**

**Day 3**

**Day 4**

**Day 5**

<p><b>LESSON FOCUS</b> <b>Instruction Coach</b> <b>Lesson 4: Understanding Square and Cube Roots</b></p> <ul style="list-style-type: none"> <li>• <i>Student Edition</i> p. 26; 25 min.</li> <li>• <i>Teacher’s Manual</i> pp. 26–27</li> <li>• <i>EL Adaptations Lesson 4</i></li> </ul> <p><b>Before the Lesson</b> Make sure students are acquainted with square roots of numbers; review square roots of square numbers so they have a feeling for inverses. See Before the Lesson. Begin UNDERSTAND section as time permits.</p> <hr/> <p><b>DIFFERENTIATION OPTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>Support Coach</b> <b>Teacher’s Manual</b> pp. 10–11, <i>PLUG IN: Build Background</i>. 15 min.</li> <li>• <b>Performance Coach</b> <b>Teacher’s Edition</b> pp. 10–11 with “Getting the Idea” section of <i>Student Edition</i> p. 42. 15 min.</li> <li>• <b>Readiness</b></li> </ul>	<p><b>LESSON FOCUS</b> <b>Instruction Coach</b> <b>Lesson 4: Understanding Square and Cube Roots</b></p> <ul style="list-style-type: none"> <li>• <i>Student Edition</i> p. 26; 25 min.</li> <li>• <i>Teacher’s Manual</i> pp. 26–27</li> <li>• <i>EL Adaptations Lesson 4</i></li> </ul> <p><b>Understand</b> Go over critical vocabulary and distinguish between <i>principal square root</i> and <i>square root</i>. Alert students to the Glossary where they can find definitions of all words used in the lessons.</p> <hr/> <p><b>DIFFERENTIATION OPTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>Support Coach</b> <b>Teacher’s Manual</b> pp. 12–13, <i>POWER UP: Build Background</i>. 15 min.</li> <li>• <b>Performance Coach</b> <b>Teacher’s Edition</b> pp. 10–11, with <i>Examples 1–2 of Student Edition</i> pp. 42–43. 15 min.</li> <li>• <b>Readiness</b></li> </ul>	<p><b>LESSON FOCUS</b> <b>Instruction Coach</b> <b>Lesson 4: Understanding Square and Cube Roots</b></p> <ul style="list-style-type: none"> <li>• <i>Student Edition</i> p. 27; 25 min.</li> <li>• <i>Teacher’s Manual</i> pp. 26–27</li> <li>• <i>EL Adaptations Lesson 4</i></li> </ul> <p><b>Connect</b> Move through each of the first two steps at the top carefully; repeat the same steps with another example. Do the same with the cubic equation.</p> <hr/> <p><b>DIFFERENTIATION OPTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>Support Coach</b> <b>Teacher’s Manual</b> pp. 12–13, <i>POWER UP: Introduce and Model</i>. 15 min.</li> <li>• <b>Performance Coach</b> <b>Teacher’s Edition</b> pp. 10–11, with <i>Examples 3–6 of Student Edition</i> pp. 44–47. 15 min.</li> <li>• <b>Readiness</b></li> </ul>	<p><b>LESSON FOCUS</b> <b>Instruction Coach</b> <b>Lesson 4: Understanding Square and Cube Roots</b></p> <ul style="list-style-type: none"> <li>• <i>Student Edition</i> pp. 28–29; 30 min.</li> <li>• <i>Teacher’s Manual</i> pp. 26–27</li> <li>• <i>EL Adaptations Lesson 4</i></li> </ul> <p><b>Practice</b> It is important to read these questions to students so that each one is clear and understood before students get started. A designated appropriate reader among the students might work.</p> <hr/> <p><b>DIFFERENTIATION OPTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>Support Coach</b> <b>Teacher’s Manual</b> pp. 14–17, <i>READY TO GO: Support Independent Practice (1–8)</i>. Extra challenge: Questions 30 and 31 on p. 29 of <i>Instruction Coach Student Edition</i>. 10 min.</li> <li>• <b>Performance Coach</b> <b>Teacher’s Edition</b> pp. 10–11 with <i>Lesson Practice of Student Edition</i> pp. 48–51. 10 min or as time permits.</li> <li>• <b>Readiness</b></li> </ul>	<p><b>LESSON FOCUS</b> <b>Instruction Coach</b> <b>Lesson 5: Scientific Notation</b></p> <ul style="list-style-type: none"> <li>• <i>Student Edition</i> p. 30; 25 min.</li> <li>• <i>Teacher’s Manual</i> pp. 28–29</li> <li>• <i>EL Adaptations Lesson 5</i></li> </ul> <p><b>Before the Lesson</b> Accent powers of 10 (positive and negative exponents) and their decimal representation with examples. Make sure the vocabulary is understood. Begin UNDERSTAND section as time permits.</p> <hr/> <p><b>DIFFERENTIATION OPTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>Support Coach</b> <b>Teacher’s Manual</b> pp. 18–19, <i>PLUG IN: Build Background</i>. 15 min.</li> <li>• <b>Performance Coach</b> <b>Teacher’s Edition</b> pp. 12–13 with <i>Getting the Idea</i> section of <i>Student Edition</i> p. 52. 15 min.</li> <li>• <b>Readiness</b></li> </ul>
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**Waggle™**

- ▶ **Goal** Rational and Irrational Numbers
- ▶ **Goal** Exponents and Roots
- ▶ **Goal** Scientific Notation



**Day 1**

**Day 2**

**Day 3**

**Day 4**

**Day 5**

► **Domain 2: Expressions and Equations**

**LESSON FOCUS**  
**Instruction Coach**

**Lesson 5: Scientific Notation**

- *Student Edition* p. 30; 30 min.
- *Teacher's Manual* pp. 28–29
- *EL Adaptations Lesson 5*

**Understand**

The essence of scientific notation is explained here, so walk through each step, even reading what is on this page and expanding on the main points. Review *coefficient*. Add further examples as necessary.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 20–21, *POWER UP: Model Application (A)*. 10 min.
- **Performance Coach Teacher's Edition** pp. 12–13, with Examples 1–3 of *Student Edition* pp. 52–53. 10 min.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**

**Lesson 5: Scientific Notation**

- *Student Edition* p.31; 20 min.
- *Teacher's Manual* pp. 28–29
- *EL Adaptations Lesson 5*

**Connect**

Make sure these word problems are clear, and students understand what needs to be done. This page deals with *how many times as* in comparisons, and introduces dividing two numbers in scientific notation (see Lesson 6). See advice on EL, p. 21 of *Support Coach Teacher's Manual*.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 20–21, *POWER UP: Model Application (B)*. 20 min.
- **Performance Coach Teacher's Edition** pp. 12–13, with Examples 4–6 of *Student Edition* pp. 54–55. 20 min.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**

**Lesson 5: Scientific Notation**

- *Student Edition* pp. 32–33; 30 min.
- *Teacher's Manual* pp. 28–29
- *EL Adaptations Lesson 5*

**Practice**

You may want to ask students to do the Practice in stages, reviewing each section before moving forward. See advice on EL, p. 23 of *Support Coach Teacher's Manual*.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 20–21, *POWER UP: Practice and Assess. Extra challenge: see Questions 23 and 24 on p. 33 of Instruction Coach Student Edition*. 10 min.
- **Performance Coach Teacher's Edition** pp. 12–13, with *Lesson Practice of Student Edition* pp. 56–59. 10 min or as time permits.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**

**Lesson 6: Using Scientific Notation**

- *Student Edition* p. 34; 20 min.
- *Teacher's Manual* pp. 30–31
- *EL Adaptations Lesson 6*

**Example A and Example B**

See Before the Lesson for advice on reviewing properties, as they are used when multiplying and dividing. See Example A for an application. Begin UNDERSTAND section as time permits.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 22–25, *READY TO GO: Build Background*. 20 min.
- **Performance Coach Teacher's Edition** pp. 14–15, with *Getting the Idea* section of *Student Edition* and Examples 1–2 pp. 60–61. 20 min.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**

**Lesson 6: Using Scientific Notation**

- *Student Edition* p. 35; 25 min.
- *Teacher's Manual* pp. 30–31
- *EL Adaptations Lesson 6*

**Example C and Example D**

Notice the use of a calculator in Examples C and D. Students should be encouraged to use them. Make sure they can read answers.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 22–25, *READY TO GO: Work Together (A)*. 15 min.
- **Performance Coach Teacher's Edition** pp. 14–15, of *Student Edition* with Examples 3–6 pp. 62–64. 15 min.
- **Readiness**

**Waggle™**

► **Goal** Scientific Notation

► **Goal** Scientific Notation

Day 1

Day 2

Day 3

Day 4

Day 5

► **Domain 2: Expressions and Equations****LESSON FOCUS****Instruction Coach****Lesson 6: Using Scientific Notation**

- *Student Edition*  
p. 36; 25 min.
- *Teacher's Manual*  
pp. 30–31
- *EL Adaptations* Lesson 6

**Example E**

Check to see if students can look at a number in *scientific notation* and interpret it as being less than or greater than a fixed number such as 1,000,000.

**DIFFERENTIATION OPTIONS**

- **Support Coach**  
*Teacher's Manual*  
pp. 22–25, **READY TO GO:**  
*Work Together (B)*. 15 min.
- **Performance Coach**  
*Teacher's Edition*  
pp. 14–15, with *Coached Example from Student Edition*  
p. 64. 15 min.
- **Readiness**

**LESSON FOCUS****Instruction Coach****Lesson 6: Using Scientific Notation**

- *Student Edition*  
p. 37; 25 min.
- *Teacher's Manual*  
pp. 30–31
- *EL Adaptations* Lesson 6

**Problem Solving**

Read the problem to students and make sure each step is clear. See p. 24 of *Support Coach Teacher's Manual* for a useful advice for EL.

**DIFFERENTIATION OPTIONS**

- **Support Coach**  
*Teacher's Manual*  
pp. 22–25, **READY TO GO:**  
*Problem Solving*. 15 min.
- **Performance Coach**  
*Teacher's Edition*  
pp. 14–15, with *Lesson Practice problems 1–7 from Student Edition* pp. 65–66.  
15 min or as time permits.
- **Readiness**

**LESSON FOCUS****Instruction Coach****Lesson 6: Using Scientific Notation**

- *Student Edition*  
pp. 38–39; 25 min.
- *Teacher's Manual*  
pp. 30–31
- *EL Adaptations* Lesson 6

**Practice**

Be sure that when students write a product or quotient in scientific notation, that they write the decimal part as a number between 1 and 10.

**DIFFERENTIATION OPTIONS**

- **Support Coach**  
*Teacher's Manual*  
pp. 22–25, **READY TO GO:**  
*Support Independent Practice (1–6)*. Extra challenges: see *Questions 22 and 23 on p. 39 of Instruction Coach Student Edition*. 15 min.
- **Performance Coach**  
*Teacher's Edition*  
pp. 14–15, with *Lesson Practice problems 8–12 from Student Edition* pp. 67–68.  
15 min or as time permits.
- **Readiness**

**LESSON FOCUS****Instruction Coach****Lesson 7: Representing and Interpreting Proportional Relationships**

- *Student Edition*  
p. 40; 20 min.
- *Teacher's Manual*  
pp. 32–33
- *EL Adaptations* Lesson 7

**Understand**

Check out the word list on p. 32 of *Instruction Coach Teacher's Manual* to make sure students understand each word.

**DIFFERENTIATION OPTIONS**

- **Support Coach**  
*Teacher's Manual*  
pp. 26–27, **PLUG IN:** *Model and Application (B)*. 20 min.
- **Performance Coach**  
*Teacher's Edition*  
pp. 16–17, with *Getting the Idea section and Examples 1–2 of Student Edition*  
pp. 69–71. 20 min.
- **Readiness**

**LESSON FOCUS****Instruction Coach****Lesson 7: Representing and Interpreting Proportional Relationships**

- *Student Edition*  
p. 41; 20 min.
- *Teacher's Manual*  
pp. 32–33
- *EL Adaptations* Lesson 7

**Connect**

Review each word of the word list on p. 32 of *Instruction Coach Teacher's Manual*.

**DIFFERENTIATION OPTIONS**

- **Support Coach**  
*Teacher's Manual*  
pp. 26–27, **PLUG IN:** *Model and Application (B)*. 20 min.
- **Performance Coach**  
*Teacher's Edition*  
pp. 16–17, with *Examples 3–5 of Student Edition*  
pp. 72–74. 20 min.
- **Readiness**

Waggle™

► **Goal** Scientific Notation► **Goal** Proportional Relationships and Slope

Day 1

Day 2

Day 3

Day 4

Day 5

► **Domain 2: Expressions and Equations**

**LESSON FOCUS**  
**Instruction Coach**  
**Lesson 7: Representing and Interpreting Proportional**

**Relationships**

- *Student Edition* p. 42; 25 min.
- *Teacher's Manual* pp. 32–33
- *EL Adaptations Lesson 7*

**Example A**

See p. 26 of *Support Coach Teacher's Manual* for a useful tip on slope.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 28–29, *POWER UP: Model and Application (A)*. 15 min.
- **Performance Coach Teacher's Edition** pp. 16–17, with *Examples 6–7 of Student Edition* pp. 75–76. 15 min.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**  
**Lesson 7: Representing and Interpreting Proportional Relationships**

- *Student Edition* p. 43; 30 min.
- *Teacher's Manual* pp. 32–33
- *EL Adaptations Lesson 7*

**Example B**

To illustrate the data more vividly, ask students to draw a graph for the cost of gasoline. Ask students to look at the graph and answer the question of the example.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 28–29, *POWER UP: Model and Application (B)*. 10 min.
- **Performance Coach Teacher's Edition** pp. 16–17, with *Coached Example of Student Edition* p. 77. 10 min.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**  
**Lesson 7: Representing and Interpreting Proportional Relationships**

- *Student Edition* pp. 44–45; 30 min.
- *Teacher's Manual* pp. 32–33
- *EL Adaptations Lesson 7*

**Practice**

Explain all parts of Practice and work out questions that are not clear to students. You can always use a Practice to diagnose progress and difficulties.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 28–29, *POWER UP: Practice and Assess. Extra challenge: Question 8 on p. 45 of Instruction Coach Student Edition*. 10 min.
- **Performance Coach Teacher's Edition** pp. 16–17, with *Lesson Practice of Student Edition* pp. 78–81. 10 min or as time permits.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**  
**Lesson 8: Relating Slope and y-intercept to Linear Equations**

- *Student Edition* p. 46; 25 min.
- *Teacher's Manual* pp. 34–35
- *EL Adaptations Lesson 8*

**Understand**

Go over all steps slowly and carefully as there is much here. Make sure the idea of the difference in y values divided by the difference in x values makes sense in terms of rate of change.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 36–37, *POWER UP: Introduce and Model*. 15 min.
- **Performance Coach Teacher's Edition** pp. 18–19, with *Getting the Idea section of Student Edition* p. 82. 15 min.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**  
**Lesson 8: Relating Slope and y-intercept to Linear Equations**

- *Student Edition* p. 47; 25 min.
- *Teacher's Manual* pp. 34–35
- *EL Adaptations Lesson 8*

**Connect**

Ask: What is *slope* of a line? Explain that it is equal to the constant of proportionality or rate of change. See advice for EL on p. 34 of *Support Coach Teacher's Manual*.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 36–37, *POWER UP: Model Application (A)*. 15 min.
- **Performance Coach Teacher's Edition** pp. 18–19, with *Examples 1–2 of Student Edition* pp. 83–85. 15 min.
- **Readiness**

Waggle™

► **Goal** Proportional Relationships and Slope

► **Goal** Proportional Relationships and Slope

Day 1

Day 2

Day 3

Day 4

Day 5

## ► Domain 2: Expressions and Equations

**LESSON FOCUS****Instruction Coach****Lesson 8: Relating Slope and y-intercept to Linear Equations**

- *Student Edition* p. 48; 25 min.
- *Teacher's Manual* pp. 34–35
- *EL Adaptations Lesson 8*

**Example**

See p. 36 of *Support Coach Teacher's Manual* for a useful tip for EL.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 36–37, *POWER UP: Model Application (B)*. 15 min.
- **Performance Coach Teacher's Edition** pp. 18–19, with Examples 3–4 of *Student Edition* pp. 85–86. 15 min.
- **Readiness**

**LESSON FOCUS****Instruction Coach****Lesson 8: Relating Slope and y-intercept to Linear Equations**

- *Student Edition* p. 49; 30 min.
- *Teacher's Manual* pp. 34–35
- *EL Adaptations Lesson 8*

**Problem Solving**

Remind students of the 4-step process for solving problems. See p. 38 of *Support Coach Teacher's Manual* for a useful tip for EL.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 38–41, *READY TO GO: Problem Solving*. 10 min.
- **Performance Coach Teacher's Edition** pp. 18–19, with Coached Example of *Student Edition* p. 87. 10 min.
- **Readiness**

**LESSON FOCUS****Instruction Coach****Lesson 8: Relating Slope and y-intercept to Linear Equations**

- *Student Edition* pp. 50–51; 30 min.
- *Teacher's Manual* pp. 34–35
- *EL Adaptations Lesson 8*

**Practice**

Each section asks different questions, so be prepared to instruct students on what is coming for each section of Practice.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 38–41, *READY TO GO: Practice and Assess. Extra challenge: p. 51, Questions 15 and 16 of Instruction Coach Student Edition*. 10 min.
- **Performance Coach Teacher's Edition** pp. 18–19, with Lesson Practice section of *Student Edition* pp. 88–91. 10 min or as time permits.
- **Readiness**

**LESSON FOCUS****Instruction Coach****Lesson 9: Solving Equations in One Variable**

- *Student Edition* p. 52; 20 min.
- *Teacher's Manual* pp. 35–36
- *EL Adaptations Lesson 9*

**Before the Lesson**

This time solving takes two steps, so show examples of one-step and two-step solutions so this difference is clear. There are often a few preliminary steps that are not counted, such as combining like terms, or rearranging terms. Begin UNDERSTAND section as time permits.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 44–45, *POWER UP: Build Background*. 20 min.
- **Performance Coach Teacher's Edition** pp. 20–21, with *Getting the Idea* section of *Student Edition* p. 92. 20 min.
- **Readiness**

**LESSON FOCUS****Instruction Coach****Lesson 9: Solving Equations in One Variable**

- *Student Edition* p. 52; 30 min.
- *Teacher's Manual* pp. 35–36
- *EL Adaptations Lesson 9*

**Understand**

Before any solving takes place, equations have to be simplified. Ask: 'What are *like terms*?' Help students follow the string of steps on the way to the solution.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 44–45, *POWER UP: Introduce and Model*. 10 min.
- **Performance Coach Teacher's Edition** pp. 20–21, with Examples 1–2 of *Student Edition* pp. 92–94. 10 min.
- **Readiness**

Waggle™

► **Goal** Proportional Relationships and Slope► **Goal** Solve Linear Equations

Day 1

Day 2

Day 3

Day 4

Day 5

► **Domain 2: Expressions and Equations**

**LESSON FOCUS**  
**Instruction Coach**

**Lesson 9: Solving Equations in One Variable**

- *Student Edition* p. 53; 25 min.
- *Teacher's Manual* pp. 35–36
- *EL Adaptations Lesson 9*

**Connect**

See p. 44 of *Support Coach Teacher's Manual* for useful EL advice. There are two separate equations to solve here, both dealing with simplifying and combining terms. At the end, there are surprises in both cases – one equation has infinitely many solutions; and a second equation has no solution. Explain how this comes about.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 44–45, *POWER UP: Model Application (A, B)*. 15 min.
- **Performance Coach Teacher's Edition** pp. 20–21, with Examples 3–5 of *Student Edition* pp. 94–96. 15 min.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**

**Lesson 9: Solving Equations in One Variable**

- *Student Edition* pp. 54–55; 30 min.
- *Teacher's Manual* pp. 35–36
- *EL Adaptations Lesson 9*

**Practice**

Have students do a section at a time, and then review their work before moving forward to the next section.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 44–45, *POWER UP: Practice and Assess. Extra challenge: Questions 15 and 16 on p. 55 of Instruction Coach Student Edition*. 10 min.
- **Performance Coach Teacher's Edition** pp. 20–21, with Lesson Practice section of *Student Edition* pp. 97–100. 10 min or as time permits.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**

**Lesson 10: Solving Systems of Two Linear Equations Graphically**

- *Student Edition* p. 56; 30 min.
- *Teacher's Manual* pp. 38–39
- *EL Adaptations Lesson 10*

**Understand**

Warn students that there may not be any solution, or possibly, an infinite number of solutions. See p. 50 of *Support Coach Teacher's Manual* for *Spotlight on Mathematical Practices*, which is good advice for all students. Remember, two equations intersecting means an ordered pair, not a single number. Explain the concept of coincident lines.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 50–51, *PLUG IN: Build Background*. 10 min.
- **Performance Coach Teacher's Edition** pp. 22–23, with *Getting the Idea* section of *Student Edition* p. 101. 10 min.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**

**Lesson 10: Solving Systems of Two Linear Equations Graphically**

- *Student Edition* p. 57; 30 min.
- *Teacher's Manual* pp. 38–39
- *EL Adaptations Lesson 10*

**Connect**

Advise students that it is a good idea to check the solution. See p. 51 of *Support Coach Teacher's Manual* for useful EL advice.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 50–51, *PLUG IN: Introduce Concepts and Vocabulary*. 10 min.
- **Performance Coach Teacher's Edition** pp. 22–23, with Example 1 of *Student Edition* pp. 101–102. 10 min.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**

**Lesson 10: Solving Systems of Two Linear Equations Graphically**

- *Student Edition* p. 58; 30 min.
- *Teacher's Manual* pp. 38–39
- *EL Adaptations Lesson 10*

**Example A**

Show students each step of Example A, and explain why there is no solution.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 50–51, *PLUG IN: Model Application (A)*. 10 min.
- **Performance Coach Teacher's Edition** pp. 22–23, with Example 2 of *Student Edition* pp. 102–103. 10 min.
- **Readiness**

**Waggle™**

► **Goal** Solve Linear Equations

► **Goal** Systems of Equations

Day 1

Day 2

Day 3

Day 4

Day 5

## ► Domain 2: Expressions and Equations

**LESSON FOCUS****Instruction Coach****Lesson 10: Solving Systems of Two Linear Equations Graphically**

- *Student Edition* p. 59; 30 min.
- *Teacher's Manual* pp. 38–39
- *EL Adaptations Lesson 10*

**Example B**

Show students each step of Example B, and explain why there are infinitely many solutions.

**DIFFERENTIATION OPTIONS**

- **Support Coach**  
*Teacher's Manual* pp. 50–51, *PLUG IN: Model Application (A)*. 10 min.
- **Performance Coach**  
*Teacher's Edition* pp. 22–23, with Example 3 of *Student Edition* p. 104. 10 min.
- **Readiness**

**LESSON FOCUS****Instruction Coach****Lesson 10: Solving Systems of Two Linear Equations Graphically**

- *Student Edition* pp. 60–61; 30 min.
- *Teacher's Manual* pp. 38–39
- *EL Adaptations Lesson 10*

**Practice**

Ask students to work out answers to each section, then go over that section and answer the questions. Then move to the next section.

**DIFFERENTIATION OPTIONS**

- **Support Coach**  
*Teacher's Manual* pp. 50–51, *PLUG IN: Practice and Assess. Extra challenge: Question 19 on p. 61 of Instruction Coach Student Edition*. 10 min.
- **Performance Coach**  
*Teacher's Edition* pp. 22–23, with *Lesson Practice of Student Edition* pp. 106–108. 10 min or as time permits.
- **Readiness**

**LESSON FOCUS****Instruction Coach****Lesson 11: Solving Systems of Two Linear Equations Algebraically**

- *Student Edition* p. 62; 25 min.
- *Teacher's Manual* pp. 40–41
- *EL Adaptations Lesson 11*

**Example A**

To understand how to solve a system of equations, students will have to be very careful as there are many steps involved. Carefully show each step of Example A.

**DIFFERENTIATION OPTIONS**

- **Support Coach**  
*Teacher's Manual* pp. 52–53, *POWER UP: Build Background*. 15 min.
- **Performance Coach**  
*Teacher's Edition* pp. 24–25, with Example 2 of *Student Edition* pp. 110–111. 15 min.
- **Readiness**

**LESSON FOCUS****Instruction Coach****Lesson 11: Solving Systems of Two Linear Equations Algebraically**

- *Student Edition* p. 63; 25 min.
- *Teacher's Manual* pp. 40–41
- *EL Adaptations Lesson 11*

**Example B**

The method of both Example A and Example B is the same, called *elimination*, meaning eliminating a variable.

**DIFFERENTIATION OPTIONS**

- **Support Coach**  
*Teacher's Manual* pp. 52–53, *POWER UP: Introduce and Model*. 15 min.
- **Performance Coach**  
*Teacher's Edition* pp. 24–25, with Example 3 of *Student Edition* pp. 111–112. 15 min.
- **Readiness**

**LESSON FOCUS****Instruction Coach****Lesson 11: Solving Systems of Two Linear Equations Algebraically**

- *Student Edition* p. 64; 25 min.
- *Teacher's Manual* pp. 40–41
- *EL Adaptations Lesson 11*

**Example C**

Another way to solve a system is by substitution, and students need to understand how to do both methods. Make sure students practice with a variety of equations.

**DIFFERENTIATION OPTIONS**

- **Support Coach**  
*Teacher's Manual* pp. 52–53, *POWER UP: Model Application (A)*. 15 min.
- **Performance Coach**  
*Teacher's Edition* pp. 24–25, with *Getting the Idea section and Example 1 of Student Edition* pp. 109–110. 15 min.
- **Readiness**

Waggle™

► Goal Systems of Equations

► Goal Systems of Equations



Day 1

Day 2

Day 3

Day 4

Day 5

► **Domain 2: Expressions and Equations**

**LESSON FOCUS**  
**Instruction Coach**  
**Lesson 11: Solving Systems of Two Linear Equations Algebraically**

- *Student Edition* p.25; 25 min.
- *Teacher's Manual* pp. 40–41
- *EL Adaptations Lesson 11*

**Example D**

Advise students: Do not rush through this example as it is tricky. Help students throughout this example, step by step.

**DIFFERENTIATION OPTIONS**

- **Support Coach**  
*Teacher's Manual* pp. 52–53, *POWER UP: Model Application (B)*. 15 min.
- **Performance Coach**  
*Teacher's Edition* pp. 24–25, with *Examples 4–5 of Student Edition* pp. 113–114. 15 min.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**  
**Lesson 11: Solving Systems of Two Linear Equations Algebraically**

- *Student Edition* pp. 66–67; 30 min.
- *Teacher's Manual* pp. 40–41
- *EL Adaptations Lesson 11*

**Practice**

Advise students: Do not rush through these questions and try to make sure that all work is done carefully as there are many opportunities for error.

**DIFFERENTIATION OPTIONS**

- **Support Coach**  
*Teacher's Manual* pp. 52–53, *POWER UP: Build Background. Extra challenge: Questions 15 and 16 on p. 67 of Instruction Coach Student Edition*. 10 min.
- **Performance Coach**  
*Teacher's Edition* pp. 24–25, with *Lesson Practice of Student Edition* pp. 116–120. 10 min or as time permits.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**  
**Lesson 12: Problem Solving: Using Systems of Equations**

- *Teacher's Manual* pp. 42–43
- *EL Adaptations Lesson 12*

**Before the Lesson**

Go over the ways to solve systems of equations. (See Lessons 10 and 11.) Review with examples, again asking students to be careful with the variety of moves necessary that can easily lead to error.

**DIFFERENTIATION OPTIONS**

- **Support Coach**  
*Teacher's Manual* pp. 54–57, *READY TO GO: Build Background*. 20 min.
- **Performance Coach**  
*Teacher's Edition* pp. 24–25, with *Lesson Practice of Student Edition* pp. 116–120. 20 min or as time permits.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**  
**Lesson 12: Problem Solving: Using Systems of Equations**

- *Student Edition* p. 68; 30 min.
- *Teacher's Manual* pp. 42–43
- *EL Adaptations Lesson 12*

**Nina's Wallet**

Help with the writing of the equations after students understand what needs to be done to find a solution to the problem. Then help solving the equations making each step clear.

**DIFFERENTIATION OPTIONS**

- **Support Coach**  
*Teacher's Manual* pp. 54–57, *READY TO GO: Introduce and Model*. 10 min.
- **Performance Coach**  
*Teacher's Edition* pp. 24–25, with *Lesson Practice of Student Edition* pp. 116–120. 10 min or as time permits.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**  
**Lesson 12: Problem Solving: Using Systems of Equations**

- *Student Edition* p. 69; 30 min.
- *Teacher's Manual* pp. 42–43
- *EL Adaptations Lesson 12*

**Ralph's Deli**

Help students decipher the reasons why each equation is chosen for the system of equations. Remind students to think of translating words into algebraic expressions. See p. 55 of *Instruction Coach Teacher's Manual* for useful EL advice.

**DIFFERENTIATION OPTIONS**

- **Support Coach**  
*Teacher's Manual* pp. 54–57, *READY TO GO: Work Together (A)*. 10 min.
- **Performance Coach**  
*Teacher's Edition* pp. 24–25, with *Lesson Practice of Student Edition* pp. 116–120. 10 min or as time permits.
- **Readiness**

Waggle™

► **Goal** Systems of Equations

► **Goal** Systems of Equations



Day 1

Day 2

Day 3

Day 4

Day 5

## ► Domain 2: Expressions and Equations

**LESSON FOCUS****Instruction Coach****Lesson 12: Problem Solving: Using Systems of Equations**

- *Student Edition* pp. 70–71; 20 min.
- *Teacher's Manual* pp. 42–43
- *EL Adaptations Lesson 12*

**Practice**

Read as much of each problem as is necessary to make sure students understand what needs to be done, then help with the writing of equations. Follow the 4-step process for solving problems.

**DIFFERENTIATION OPTIONS**

- **Support Coach**  
*Teacher's Manual* pp. 54–57, *READY TO GO: Support Independent Practice* (1–7). 20 min.
- **Performance Coach**  
*Teacher's Edition* pp. 24–25, with *Lesson Practice of Student Edition* pp. 116–120. 20 min or as time permits.
- **Readiness**

**REVIEW AND ASSESS****Instruction Coach****Domain 2 Review**

- *Student Edition* pp. 72–73; 40 min.
- *Student Edition* p. 6; 30 min.
- *Teacher's Manual* pp. 97–98

**Review Part 1**

Go over Questions 1–21 and discuss. Ask students to take a look at instructions for the first half of the Review on SE pp. 72–73. Make sure all instructions are clear.

See Progression Chart on TM pp. 22–23 for a view of progressions connecting the lessons of Domain 2.

**DIFFERENTIATION OPTIONS**

- **Performance Coach**  
*Teacher's Edition* p. 26, with *Domain 2 Review section of Student Edition* pp. 121–123 as time permits.

**REVIEW AND ASSESS****Instruction Coach****Domain 2 Review**

- *Student Edition* pp. 74–75; 40 min.
- *Teacher's Manual* p. 98

**Review Part 2 and Performance Task**

Go over Questions 22–30 and discuss. Pay special attention to the Performance Task on SE p. 75. Ask students to take a look at instructions for the second half of the Review on SE p. 74. In particular, clarify any doubts with respect to Performance Task (*Classroom Measurements*) on p. 75. See Progression Chart on TM pp. 22–23 for a view of progressions connecting the lessons of Domain 2.

**DIFFERENTIATION OPTIONS**

Extra challenge: Questions 29 and 30 on p. 74 of *Instruction Coach Student Edition*.

- **Performance Coach**  
*Teacher's Edition* p. 26, with *Domain 2 Review section of Student Edition* pp. 124–125 as time permits.

**REVIEW AND ASSESS****Instruction Coach****Domain 2 Assessment**

- *Assessments* pp. 12–17; 40 min.
- *Assessments Answer Key* p. 6

**Assessment Part 1**

Have students complete Questions 1–25. Provide extra time for assessments and provide readers to read word problems to students.

**DIFFERENTIATION OPTIONS**

Provide extra time and assistance for students who qualify.

**REVIEW AND ASSESS****Instruction Coach****Domain 2 Assessment**

- *Assessments* pp. 18–21; 40 min.
- *Assessments Answer Key* pp. 6–8

**Assessment Part 2**

Have students complete Questions 26–30. Provide clear explanation of questions.

**DIFFERENTIATION OPTIONS**

Provide extra time and assistance for students who qualify.

Waggle™

► Goal Systems of Equations

Day 1

Day 2

Day 3

Day 4

Day 5

► Domain 3: Functions

**LESSON FOCUS**  
**Instruction Coach**

**Lesson 13: Introducing Functions**

- *Student Edition* p. 78; 20 min.
- *Teacher's Manual* pp. 46–47
- *EL Adaptations Lesson 13*

**Before the Lesson**

Ask students to think of additional examples of where a single input yields a single output. This is in contrast to situations where a single input yields many outputs. Begin UNDERSTAND section as time permits.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 58–59, *PLUG IN. Build Background.* 20 min.
- **Performance Coach Teacher's Edition** pp. 28–29, with *Getting the Idea and Example 1 of Student Edition* p. 128. 20 min.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**

**Lesson 13: Introducing Functions**

- *Student Edition* p. 78; 20 min.
- *Teacher's Manual* pp. 46–47
- *EL Adaptations Lesson 13*

**Understand**

Distinguish between relation and function. See p. 58 of *Support Coach Teacher's Manual* for useful EL advice.

**DIFFERENTIATION OPTIONS**

Add additional practice in recognizing relations that are not functions.

- **Support Coach Teacher's Manual** pp. 58–59 for *PLUG IN. Model Application (A).* 20 min.
- **Performance Coach Teacher's Edition** pp. 28–29, with *Examples 2–4 of Student Edition* pp. 129–130. 20 min.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**

**Lesson 13: Introducing Functions**

- *Student Edition* p. 79; 30 min.
- *Teacher's Manual* pp. 46–47
- *EL Adaptations Lesson 13*

**Connect**

Make this clear: The equation here is not standard as it uses  $\pm$  indicating that both the positive and negative values are included. Make sure the vertical line test makes sense.

**DIFFERENTIATION OPTIONS**

- Understanding why the vertical line test works is key here, so provide additional examples.
- **Support Coach Teacher's Manual** pp. 58–59, *PLUG IN. Model Application (B).* 10 min.
  - **Performance Coach Teacher's Edition** pp. 28–29, with *Example 5 and Coached Example of Student Edition* p. 131. 10 min.
  - **Readiness**

**LESSON FOCUS**  
**Instruction Coach**

**Lesson 13: Introducing Functions**

- *Student Edition* pp. 80–81; 30 min.
- *Teacher's Manual* pp. 46–47
- *EL Adaptations Lesson 13*

**Practice**

Make sure students can distinguish between relations and functions. See Questions 1–6. Provide assistance with reading and interpreting questions.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 58–59, *PLUG IN. Practice and Assess. Extra challenge: Questions 11 and 12 on p. 81 of Instruction Coach Student Edition.* 10 min.
- **Performance Coach Teacher's Edition** pp. 28–29, with *Lesson Practice of Student Edition* pp. 132–136. 10 min or as time permits.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**

**Lesson 14: Comparing Functions Represented in Different Ways**

- *Student Edition* p. 82; 20 min.
- *Teacher's Manual* pp. 48–49
- *EL Adaptations Lesson 14*

**Before the Lesson**

See Before the Lesson. Add practice with additional linear equations, so that students get to see the connection with equations, graphs, and tables. Begin UNDERSTAND section as time permits.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 70–73, *READY TO GO. Build Background.* 20 min.
- **Performance Coach Teacher's Edition** pp. 30–31, with *Getting the Idea and Example 1 of Student Edition* pp. 137–138. 20 min.
- **Readiness**

Waggle™

► Goal Functions

► Goal Functions

Day 1

Day 2

Day 3

Day 4

Day 5

## ► Domain 3: Functions

**LESSON FOCUS****Instruction Coach****Lesson 14: Comparing Functions Represented in Different Ways**

- *Student Edition* p. 82; 30 min.
- *Teacher's Manual* pp. 48–49
- *EL Adaptations Lesson 14*

**Understand**

Review key words such as *slope* and *intercept*. This UNDERSTAND affords a good example of how the three representations work together.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 70–73, *READY TO GO*. Introduce and Model. 10 min.
- **Performance Coach Teacher's Edition** pp. 30–31, with Examples 2–3 of *Student Edition* pp. 138–139. 10 min.
- **Readiness**

**LESSON FOCUS****Instruction Coach****Lesson 14: Comparing Functions Represented in Different Ways**

- *Student Edition* p. 83; 30 min.
- *Teacher's Manual* pp. 48–49
- *EL Adaptations Lesson 14*

**Connect**

In UNDERSTAND, there is an opportunity to study two functions represented differently. Follow through with the TRY, but move slowly.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 70–73, *READY TO GO*. Work Together. 10 min.
- **Performance Coach Teacher's Edition** pp. 30–31, with Example 4 of *Student Edition* p. 140. 10 min.
- **Readiness**

**LESSON FOCUS****Instruction Coach****Lesson 14: Comparing Functions Represented in Different Ways**

- *Student Edition* p. 84; 20 min.
- *Teacher's Manual* pp. 48–49
- *EL Adaptations Lesson 14*

**Practice Part 1**

Review rate of change before students start on Practice Then have students complete Questions 1–3. See p. 70 of *Support Coach Teacher's Manual* for useful suggestions for EL.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 70–73, *READY TO GO*. Support Independent Practice. 20 min.
- **Performance Coach Teacher's Edition** pp. 30–31, with Coached Lesson of *Student Edition* p. 141 and begin Lesson Practice pp. 142–145. 20 min.
- **Readiness**

**LESSON FOCUS****Instruction Coach****Lesson 14: Comparing Functions Represented in Different Ways**

- *Student Edition* pp. 85; 20 min.
- *Teacher's Manual* pp. 48–49
- *EL Adaptations Lesson 14*

**Practice Part 2**

Have students complete Questions 4–7. Ask students to explain what the y-intercept of a function is; and then what the x intercept is. Ask: 'If you know the x and y intercepts can you draw the straight-line function?'

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 70–73, *READY TO GO*. Support Independent Practice. Extra challenge: Questions 6 and 7 on p. 67 of *Instruction Coach*. 20 min.
- **Performance Coach Teacher's Edition** pp. 30–31, complete lesson Practice pp. 142–145. 20 min or as time permits.
- **Readiness**

**LESSON FOCUS****Instruction Coach****Lesson 15: Linear and Nonlinear Functions**

- *Student Edition* p. 86; 20 min.
- *Teacher's Manual* pp. 50–51
- *EL Adaptations Lesson 15*

**Before the Lesson**

Review how to plot a function on a graph. Literally do this on graph paper, and make sure students know where to place each point. Begin UNDERSTAND section as time permits.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 58–59, *PLUG IN: Build Background*. 20 min.
- **Performance Coach Teacher's Edition** pp. 32–33, with *Getting the Idea* and Example 1 of *Student Edition* p. 146. 20 min.
- **Readiness**

Waggle™

► Goal Functions

► Goal Functions

**Day 1**

**Day 2**

**Day 3**

**Day 4**

**Day 5**

► **Domain 3: Functions**

**Instruction Coach**  
**Lesson 15: Linear and Nonlinear Functions**

- *Student Edition* p. 86; 20 min.
- *Teacher's Manual* pp. 50–51
- *EL Adaptations Lesson 15*

**Understand**

Do students understand the difference between linear and nonlinear functions, and can they explain the difference with examples?

**DIFFERENTIATION OPTIONS**

- **Support Coach**  
**Teacher's Manual** pp. 58–59, *PLUG IN: Introduce Concepts and Vocabulary*. 20 min.
- **Performance Coach**  
**Teacher's Edition** pp. 32–33, with Examples 2–4 of *Student Edition* pp. 147–148. 20 min
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**  
**Lesson 15: Linear and Nonlinear Functions**

- *Student Edition* p. 87; 20 min.
- *Teacher's Manual* pp. 50–51
- *EL Adaptations Lesson 15*

**Connect**

See p. 58 of *Support Coach Teacher's Manual* for useful suggestions for EL.

**DIFFERENTIATION OPTIONS**

- **Support Coach**  
**Teacher's Manual** pp. 58–59, *PLUG IN: Model Application (A, B)*. 20 min.
- **Performance Coach**  
**Teacher's Edition** pp. 32–33, with Example 5 and Coached Example of *Student Edition* p. 149. 20 min.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**  
**Lesson 15: Linear and Nonlinear Functions**

- *Student Edition* pp. 88–89; 20 min.
- *Teacher's Manual* pp. 50–51
- *EL Adaptations Lesson 15*

**Practice**

Make sure all directions are clear. Ask: 'Is it possible to look at an equation to see if it is linear or not?'

**DIFFERENTIATION OPTIONS**

- **Support Coach**  
**Teacher's Manual** pp. 58–59, *PLUG IN: Practice and Assess. Extra challenge: Questions 11–13 on p. 89 of Instruction Coach Student Edition*. 20 min.
- **Performance Coach**  
**Teacher's Edition** pp. 32–33, with Lesson Practice of *Student Edition* pp. 150–152. 20 min or as time permits.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**  
**Lesson 16: Using Functions to Model Relationships**

- *Teacher's Manual* pp. 52–53
- *EL Adaptations Lesson 16*

**Before the Lesson**

A clear understanding of the connection between *rate of change* and *slope* will be helpful for this lesson and going forward, as these are key concepts in mathematics. Use a few examples showing tables, graphs, and equations.

**DIFFERENTIATION OPTIONS**

- **Support Coach**  
**Teacher's Manual** pp. 62–65, *READY TO GO: Build Background*. 20 min.
- **Performance Coach**  
**Teacher's Edition** pp. 34–35, with *Getting the Idea and Example 1 of Student Edition* p. 154. 20 min.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**  
**Lesson 16: Using Functions to Model Relationships**

- *Student Edition* p. 90; 30 min.
- *Teacher's Manual* pp. 52–53
- *EL Adaptations Lesson 16*

**Example A**

Support understanding of key vocabulary. See p. 62 of *Support Coach Teacher's Manual* for useful suggestions for EL. Read the problem with students and explain what is necessary to find the *rate of change*.

**DIFFERENTIATION OPTIONS**

- **Support Coach**  
**Teacher's Manual** pp. 62–65, *READY TO GO: Introduce and Model*. 10 min.
- **Performance Coach**  
**Teacher's Edition** pp. 34–35, with Examples 2–3 of *Student Edition* pp. 155–157. 10 min.
- **Readiness**

Waggle™

► **Goal** Functions

► **Goal** Model Relationships with Functions

Day 1

Day 2

Day 3

Day 4

Day 5

## ► Domain 3: Functions

**LESSON FOCUS****Instruction Coach****Lesson 16: Using Functions to Model Relationships**

- *Student Edition* p. 91; 30 min.
- *Teacher's Manual* pp. 52–53
- *EL Adaptations* Lesson 16

**Example B**

This example starts with a table and asks for the rate of change, and uses a graph to check the answer. All of that needs to clear, so ask students to do a similar example using a real world setting.

**DIFFERENTIATION OPTIONS**

- **Support Coach**  
*Teacher's Manual* pp. 62–65, *READY TO GO: Work Together (A)*. 10 min.
- **Performance Coach**  
*Teacher's Edition* pp. 34–35, with *Example 4* and *Coached Example of Student Edition* pp. 157–158. 10 min.
- **Readiness**

**LESSON FOCUS****Instruction Coach****Lesson 16: Using Functions to Model Relationships**

- *Student Edition* p. 92; 20 min.
- *Teacher's Manual* pp. 52–53
- *EL Adaptations* Lesson 16

**Practice Part 1**

Show students how to get started in each section. If necessary read out the directions and show an example to get the Practice started. Then have students complete Questions 1–8 on SE p. 92. Key vocabulary includes: *rate of change*, *initial value*, and *intercept*.

**DIFFERENTIATION OPTIONS**

- **Support Coach**  
*Teacher's Manual* pp. 62–65, *READY TO GO: Support Independent Practice*. *Extra challenge: Question 13* on p. 93 of *Instruction Coach Student Edition*. 20 min.
- **Performance Coach**  
*Teacher's Edition* pp. 34–35, with *Lesson Practice of Student Edition* pp. 159–162. 20 min or as time permits.
- **Readiness**

**LESSON FOCUS****Instruction Coach****Lesson 16: Using Functions to Model Relationships**

- *Student Edition* p. 93; 20 min.
- *Teacher's Manual* pp. 52–53
- *EL Adaptations* Lesson 16

**Practice Part 2**

Have students complete Questions 9–16 on SE p. 93. Discuss the solutions with the class to make sure all understand. See Question 14, which ties these together. Go over each of these concepts.

**DIFFERENTIATION OPTIONS**

- **Support Coach**  
*Teacher's Manual* pp. 62–65, *READY TO GO: Problem Solving*. *Extra challenge: Question 13* on p. 93 of *Instruction Coach Student Edition*. 20 min.
- **Performance Coach**  
*Teacher's Edition* pp. 34–35, with *Lesson Practice of Student Edition* pp. 159–162. 20 min or as time permits.
- **Readiness**

**LESSON FOCUS****Instruction Coach****Lesson 17: Describing Functional Relationships from Graphs**

- *Teacher's Manual* pp. 54–55; 20 min.
- *EL Adaptations* Lesson 17

**Before the Lesson**

Do not forget the slope of a horizontal line and the slope of a vertical line. Explain these and show how the slope of a linear function moves from 0 through increasing values to “do not exist” to negative values as the graph moves counter-clockwise.

**DIFFERENTIATION OPTIONS**

- **Support Coach**  
*Teacher's Manual* pp. 66–67, *PLUG IN: Build Background*. 20 min.
- **Performance Coach**  
*Teacher's Edition* pp. 36–37, with *Getting the Idea* and *Examples 1–2* of *Student Edition* pp. 163–164. 20 min.
- **Readiness**

**LESSON FOCUS****Instruction Coach****Lesson 17: Describing Functional Relationships from Graphs**

- *Student Edition* p. 94; 30 min.
- *Teacher's Manual* pp. 54–55
- *EL Adaptations* Lesson 17

**Example A**

See p. 67 of *Support Coach Teacher's Manual* for useful suggestions for EL. Explain piecewise function, and show why the one shown is a function.

**DIFFERENTIATION OPTIONS**

- **Support Coach**  
*Teacher's Manual* pp. 66–67, *PLUG IN: Model Application (A)*. 10 min.
- **Performance Coach**  
*Teacher's Edition* pp. 36–37, with *Examples 3–4* of *Student Edition* pp. 165–167. 10 min.
- **Readiness**

Waggle™

► Goal Model Relationships with Functions

► Goal Model Relationships with Functions

Day 1

Day 2

Day 3

Day 4

Day 5

► **Domain 3: Functions**

**LESSON FOCUS**  
**Instruction Coach**

**Lesson 17: Describing Functional Relationships from Graphs**

- *Student Edition* p. 95; 30 min.
- *Teacher's Manual* pp. 54–55
- *EL Adaptations Lesson 17*

**Example B**

Here is another example of a nonlinear function, this being a quadratic function. Ask why all points are in Quadrant I. See Observation and Action at the bottom of p. 67 *Support Coach Teacher's Manual*.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 66–67, *PLUG IN: Support Discussion*. 10 min.
- **Performance Coach Teacher's Edition** pp. 36–37, with *Coached Example of Student Edition* p. 168. 10 min.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**

**Lesson 17: Describing Functional Relationships from Graphs**

- *Student Edition* p. 96; 20 min.
- *Teacher's Manual* pp. 54–55
- *EL Adaptations Lesson 17*

**Practice Part 1**

Have students complete Questions 1–4 on SE p. 96. Explain how to get started on each section, monitor student work to make sure they are not off track. Ask: 'Is it possible for a function to be neither increasing nor decreasing?'

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 66–67, *PLUG IN: Model Application*. 20 min.
- **Performance Coach Teacher's Edition** pp. 36–37, with *Lesson Practice of Student Edition* pp. 169–172. 20 min or as time permits.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**

**Lesson 17: Describing Functional Relationships from Graphs**

- *Student Edition* p. 97; 20 min.
- *Teacher's Manual* pp. 54–55
- *EL Adaptations Lesson 17*

**Practice Part 2**

Have students complete Questions 5–7 on SE p. 97. Work through Questions 6 and 7 to make sure all understand the reasoning behind them.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 66–67, *PLUG IN: Practice and Assess*. 20 min.
- **Performance Coach Teacher's Edition** pp. 36–37, with *Lesson Practice of Student Edition* pp. 169–172. 20 min or as time permits.
- **Readiness**

**REVIEW AND ASSESS**  
**Instruction Coach**  
**Domain 3 Review**

- *Student Edition* pp. 98–99; 40 min.
- *Teacher's Manual* pp. 101

**Review Part 1**

Go over Questions 1–9 and discuss. Ask students to take a look at instructions for the first half of the Review. Make sure all instructions are clear. See Progression Chart on pp. 44–45 TM for a view of progressions connecting the lessons of Domain 3.

**DIFFERENTIATION OPTIONS**

- **Performance Coach Teacher's Edition** p. 38, with *Domain 3 Review section of Student Edition* pp. 173–177 as time permits.

**REVIEW AND ASSESS**  
**Instruction Coach**  
**Domain 3 Review**

- *Student Edition* pp. 99–101; 40 min.
- *Teacher's Manual* pp. 101–102

**Review Part 2 and Performance Task**

Go over Questions 10–14 and discuss. Pay special attention to the Performance Task on SE p. 101. Ask students to take a look at instructions for the second half of the Review. In particular, clarify any doubts with respect to Performance Task (*Describing Functions*) on p. 101. See Progression Chart on TM pp. 44–45 for a view of progressions connecting the lessons of Domain 3.

**DIFFERENTIATION OPTIONS**

- **Performance Coach Teacher's Edition** p. 38, with *Domain 3 Review section of Student Edition* pp. 173–177 as time permits.

Waggle™

► **Goal** Model Relationships with Functions



Day 1

Day 2

Day 3

Day 4

Day 5

## ► Domain 3: Functions

**REVIEW AND ASSESS**  
**Instruction Coach**  
**Domain 3 Assessment**

- *Assessments pp. 22–28; 40 min.*
- *Assessments Answer Key p. 9*

**Assessment Part 1**

Have students complete Questions 1–20. Provide extra time for assessments and provide readers to read word problems to students.

**DIFFERENTIATION OPTIONS**

Provide extra time and assistance for students who qualify.

## ► Domain 4: Geometry

**REVIEW AND ASSESS**  
**Instruction Coach**  
**Domain 3 Assessment**

- *Assessments pp. 29–33; 40 min.*
- *Assessments Answer Key pp. 9–11*

**Assessment Part 2**

Have students complete Questions 21–25. Provide clear explanation of questions.

**DIFFERENTIATION OPTIONS**

Provide extra time and assistance for students who qualify.

**LESSON FOCUS**  
**Instruction Coach**  
**Lesson 18: Properties of Rotations, Reflections, and Translations**

- *Student Edition p. 104; 40 min.*
- *Teacher's Manual pp. 58–59; 40 min.*
- *EL Adaptations Lesson 18*

**Before the Lesson**

Get ready for a new round of words. See Vocabulary. Go over each of these with the support of a good model: Use the three sections called Introduce and Model from *Support Coach Teacher's Manual* pp. 74–75, 82–83, and 90–91 for PLUG IN. These will provide concrete introductions to translation, reflection, and rotation. Begin UNDERSTAND section as time permits.

**DIFFERENTIATION OPTIONS**

- **Performance Coach Teacher's Edition**  
*pp. 40–45, with Getting the Idea sections of Student Edition pp. 180, 189, and 200 as time permits.*
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**  
**Lesson 18: Properties of Rotations, Reflections, and Translations**

- *Student Edition pp. 104–105; 20 min.*
- *Teacher's Manual pp. 58–59*
- *EL Adaptations Lesson 18*

**Understand–Connect**

Refer to the plan used on Day 1 of this lesson; see the same references below. These pages can be used for a variety of students allowing for wide differentiation. Vocabulary and models are keys to moving forward.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual**  
*pp. 74–75, 82–83, and 90–91, PLUG IN: Introduce and Model. 20 min.*
- **Performance Coach Teacher's Edition**  
*pp. 40–41, with Examples 1–4 and Coached Example of Student Edition pp. 180–184. 20 min.*
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**  
**Lesson 18: Properties of Rotations, Reflections, and Translations**

- *Student Edition p. 106; 20 min.*
- *Teacher's Manual pp. 58–59*
- *EL Adaptations Lesson 18*

**Example A**

See the references below. These are from three PLUG IN sections (called Support Discussion) of *Support Coach Teacher's Manual*, chosen to support Examples A and B. These sections are designed to create discussion in groups about the ideas and models of this lesson.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual**  
*pp. 74–75, 82–83, and 90–91, PLUG IN: Support Discussion. 20 min.*
- **Performance Coach Teacher's Edition**  
*pp. 44–45, with Examples 1–4 and Coached Example of Student Edition pp. 200–205. 20 min.*
- **Readiness**

Waggle™

► Goal Rigid Transformations and Congruence



**Day 1**

**Day 2**

**Day 3**

**Day 4**

**Day 5**

► **Domain 4: Geometry**

**LESSON FOCUS**

**Instruction Coach**

**Lesson 18: Properties of Rotations, Reflections, and Translations**

- *Student Edition* p. 107; 20 min.
- *Teacher's Manual* pp. 58–59
- *EL Adaptations Lesson 18*

**Example B**

See the references below. These are from three PLUG IN sections (called Support Discussion) of *Support Coach Teacher's Manual*, chosen to support Examples A and B. These sections are designed to create discussion in groups about the ideas and models of this lesson.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 74–75, 82–83, and 90–91, *PLUG IN: Support Discussion*. 20 min.
- **Performance Coach Teacher's Edition** pp. 42–43, with Examples 1–4 and Coached Example of Student Edition pp. 189–194. 20 min.
- **Readiness**

**Waggle™**

► **Goal** Rigid Transformations and Congruence

**LESSON FOCUS**

**Instruction Coach**

**Lesson 18: Properties of Rotations, Reflections, and Translations**

- *Student Edition* pp. 108–109; 30 min.
- *Teacher's Manual* pp. 58–59
- *EL Adaptations Lesson 18*

**Practice**

Guide students slowly through this practice, reminding them of the various characteristics of the rigid motions studied. See pp. 74, 82, and 90 of *Support Coach Teacher's Manual* for useful suggestions for EL.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 74–75, 82–83, and 90–91, *PLUG IN: Practice and Assess*. 10 min.
- **Performance Coach Teacher's Edition** pp. 40–45, with Lesson Practice sections of Student Edition pp. 185–188, 195–199, and 206–209. 10 min or as time permits.
- **Readiness**

**LESSON FOCUS**

**Instruction Coach**

**Lesson 19: Understanding Congruence of Two-Dimensional Figures (Using Rigid Motions)**

- *Student Edition* p. 110; 30 min.
- *Teacher's Manual* pp. 60–61
- *EL Adaptations Lesson 19*

**Before the Lesson**

Start with an understanding of what is meant by *congruence* in many aspects, from models to real world objects to geometric figures. Review the three rigid motions already studied to ensure that these are clear. See references below for additional activities. Begin UNDERSTAND section as time permits.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 76–77, 84–85, and 92–93, *POWER UP: Build Background*. 10 min.
- **Performance Coach Teacher's Edition** pp. 48–49, with *Getting the Idea* section of Student Edition pp. 218–219. 10 min.
- **Readiness**

► **Goal** Rigid Transformations and Congruence

**LESSON FOCUS**

**Instruction Coach**

**Lesson 19: Understanding Congruence of Two-Dimensional Figures (Using Rigid Motions)**

- *Student Edition* p. 110; 30 min.
- *Teacher's Manual* pp. 60–61
- *EL Adaptations Lesson 19*

**Understand**

Point out the two rigid motions of this example to explain what is meant by two figures being *congruent*. The sections referenced below called *Introduce and Model* will provide further clarifying activities.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 76–77, 84–85, and 92–93, *POWER UP: Introduce and Model*. 10 min.
- **Performance Coach Teacher's Edition** pp. 48–49, with Example 1 of Student Edition pp. 219–220. 10 min.
- **Readiness**

**LESSON FOCUS**

**Instruction Coach**

**Lesson 19: Understanding Congruence of Two-Dimensional Figures (Using Rigid Motions)**

- *Student Edition* p. 111; 30 min.
- *Teacher's Manual* pp. 60–61
- *EL Adaptations Lesson 19*

**Connect**

Here we see two different ways to show that two figures are *congruent*. Again as with UNDERSTAND, see the three *Introduce and Model* sections referenced below.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 76–77, 84–85, and 92–93, *POWER UP: Introduce and Model*. 10 min.
- **Performance Coach Teacher's Edition** pp. 48–49, with Example 2 of Student Edition p. 221. 10 min.
- **Readiness**

Day 1

Day 2

Day 3

Day 4

Day 5

► **Domain 4: Geometry**

**LESSON FOCUS**  
**Instruction Coach**  
**Lesson 19: Understanding Congruence of Two-Dimensional Figures (Using Rigid Motions)**

- *Student Edition* pp. 112–113; 20 min.
- *Teacher’s Manual* pp. 60–61
- *EL Adaptations Lesson 19*

**Practice**

Read each question to students if necessary, and make sure all directions are clear. For additional practice see references below taken from three lessons of *Support Coach Teacher’s Manual*.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher’s Manual** pp. 76–77, 84–85, and 92–93, **POWER UP: Model Application**. 20 min.
- **Performance Coach Teacher’s Edition** pp. 48–49, with *Example 3 of Student Edition* p. 222. 20 min.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**  
**Lesson 20: Rigid Motion on the Coordinate Plane**

- *Student Edition* p. 114; 20 min.
- *Teacher’s Manual* pp. 62–63
- *EL Adaptations Lesson 20*

**Example A**

Use the example here to prepare students for predictable changes in coordinates from pre-image to image when applying a rigid motion on the coordinate plane.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher’s Manual** pp. 78–81, **READY TO GO: Introduce and Model**. 20 min.
- **Performance Coach Teacher’s Edition** pp. 40–41, with *Lesson Practice of Student Edition* pp. 185–188. 20 min.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**  
**Lesson 20: Rigid Motion on the Coordinate Plane**

- *Student Edition* p. 115; 30 min.
- *Teacher’s Manual* pp. 62–63
- *EL Adaptations Lesson 20*

**Example B**

Make the generalization required and review this with another example.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher’s Manual** pp. 86–91, **READY TO GO: Introduce and Model**. 10 min.
- **Performance Coach Teacher’s Edition** pp. 42–43, with *Lesson Practice of Student Edition* pp. 195–199. 10 min or as time permits.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**  
**Lesson 20: Rigid Motion on the Coordinate Plane**

- *Student Edition* p. 116; 30 min.
- *Teacher’s Manual* pp. 62–63
- *EL Adaptations Lesson 20*

**Example C**

Make the generalization required and review this with another example.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher’s Manual** pp. 94–97, **READY TO GO: Introduce and Model**. 10 min.
- **Performance Coach Teacher’s Edition** pp. 44–45, with *Lesson Practice of Student Edition* pp. 206–209. 10 min or as time permits.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**  
**Lesson 20: Rigid Motion on the Coordinate Plane**

- *Student Edition* p. 117; 30 min.
- *Teacher’s Manual* pp. 62–63
- *EL Adaptations Lesson 20*

**Problem Solving**

Remind students of the 4–step process for problem solving. Read the problem to students and clarify what is on the diagram.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher’s Manual** pp. 94–97, **READY TO GO: Problem Solving**. 10 min.
- **Performance Coach Teacher’s Edition** pp. 40–45, with completion of *Lesson Practice* sections of *Student Edition* pp. 185–188, 195–199, 206–209. 10 min or as time permits.
- **Readiness**

**Waggle™**

► **Goal** Rigid Transformations and Congruence

► **Goal** Translations, Rotations, and Reflections  
 ► **Goal** Dilations and Similarity

Day 1

Day 2

Day 3

Day 4

Day 5

► **Domain 4: Geometry**

**LESSON FOCUS**

**Instruction Coach**

**Lesson 20: Rigid Motion on the Coordinate Plane**

- *Student Edition* pp. 118–119; 30 min.
- *Teacher’s Manual* pp. 62–63
- *EL Adaptations Lesson 20*

**Practice**

See pp. 74, 82, and 90 of *Support Coach Teacher’s Manual* for useful EL advice. Move through this Practice in sections; the first 2 Questions, then 2 more, each time checking student work.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher’s Manual** pp. 94–97, **READY TO GO: Support Independent Practice**. 10 min.
- **Performance Coach Teacher’s Edition** pp. 40–45, with completion of Lesson Practice sections of *Student Edition* pp. 185–188, 195–199, 206–209. 10 min or as time permits
- **Readiness**

**LESSON FOCUS**

**Instruction Coach**

**Lesson 21: Dilations on the Coordinate Plane**

- *Student Edition* p. 120; 20 min.
- *Teacher’s Manual* pp. 64–65
- *EL Adaptations Lesson 21*

**Before the Lesson**

Introduce *scale factor* as in blueprints, maps, and photographs. Speak of enlarging a photo, reducing a photo, or zooming in and out of a screen view. Dilation does not change the shape of the figure involved. Begin UNDERSTAND section as time permits.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher’s Manual** pp. 98–99, **PLUG IN: Support Build Background**. 20 min.
- **Performance Coach Teacher’s Edition** pp. 46–47, with *Getting the Idea and Example 1* of *Student Edition* pp. 210–211. 20 min.
- **Readiness**

**LESSON FOCUS**

**Instruction Coach**

**Lesson 21: Dilations on the Coordinate Plane**

- *Student Edition* p. 120; 20 min.
- *Teacher’s Manual* pp. 64–65
- *EL Adaptations Lesson 21*

**Understand**

The dilation here is an enlargement. Explain how the rectangle became enlarged by a factor of 3. Go over each step of the process.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher’s Manual** pp. 98–99, **PLUG IN: Support Introduce and Model**. 20 min.
- **Performance Coach Teacher’s Edition** pp. 46–47, with *Examples 2–3* of *Student Edition* pp. 211–212. 20 min.
- **Readiness**

**LESSON FOCUS**

**Instruction Coach**

**Lesson 21: Dilations on the Coordinate Plane**

- *Student Edition* p. 121; 20 min.
- *Teacher’s Manual* pp. 64–65
- *EL Adaptations Lesson 21*

**Connect**

In Connect, point out that this *dilation* is a reduction (scale factor 12) shown on a coordinate plane. Make it clear that the ordered pairs all change by the same factor.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher’s Manual** pp. 100–101, **POWER UP: Model Application (A, B)**. 20 min.
- **Performance Coach Teacher’s Edition** pp. 46–47, with *Coached Example of Student Edition* p. 213. 20 min.
- **Readiness**

**LESSON FOCUS**

**Instruction Coach**

**Lesson 21: Dilations on the Coordinate Plane**

- *Student Edition* pp. 122–123; 30 min.
- *Teacher’s Manual* pp. 64–65
- *EL Adaptations Lesson 21*

**Practice**

Read all directions to students if necessary, and make sure all questions are clear. See p. 100 of *Support Coach Teacher’s Manual* for a useful suggestion for EL.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher’s Manual** pp. 102–105, **READY TO GO: Support Independent Practice (3–9)**. Extra challenge: Questions 9 and 10 on p. 123 of *Instruction Coach Student Edition*. 10 min.
- **Performance Coach Teacher’s Edition** pp. 46–47, with Lesson Practice section of *Student Edition* pp. 214–217. 10 min or as time permits.
- **Readiness**

**Waggle™**

- **Goal** Translations, Rotations, and Reflections
- **Goal** Dilations and Similarity

- **Goal** Translations, Rotations, and Reflections
- **Goal** Dilations and Similarity

Day 1

Day 2

Day 3

Day 4

Day 5

## ► Domain 4: Geometry

**LESSON FOCUS****Instruction Coach****Lesson 22: Understanding Similarity of Two-Dimensional Figures (Using Transformations)**

- *Student Edition*  
p. 124; 30 min.
- *Teacher's Manual*  
pp. 66–67
- *EL Adaptations Lesson 22*

**Before the Lesson**

Distinguish between congruent and similar figures. Use models. Broaden the discussion to three-dimensional figures. Begin UNDERSTAND section as time permits.

**DIFFERENTIATION OPTIONS**

- **Support Coach**  
*Teacher's Manual*  
pp. 108–109, *POWER UP: Build Background*. 10 min.
- **Performance Coach**  
*Teacher's Edition*  
pp. 48–49, with *Example 4 of Student Edition* p. 223. 10 min.
- **Readiness**

**LESSON FOCUS****Instruction Coach****Lesson 22: Understanding Similarity of Two-Dimensional Figures (Using Transformations)**

- *Student Edition*  
p. 124; 30 min.
- *Teacher's Manual*  
pp. 66–67
- *EL Adaptations Lesson 22*

**Understand**

Review all the rigid motions studied and make sure students understand the motions involved. See p. 108 of *Support Coach Teacher's Manual* for a useful suggestion for EL.

**DIFFERENTIATION OPTIONS**

- **Support Coach**  
*Teacher's Manual*  
pp. 108–109, *POWER UP: Introduce and Model*. 10 min.
- **Performance Coach**  
*Teacher's Edition*  
pp. 48–49, with *Coached Example of Student Edition* p. 224. 10 min.
- **Readiness**

**LESSON FOCUS****Instruction Coach****Lesson 22: Understanding Similarity of Two-Dimensional Figures (Using Transformations)**

- *Student Edition*  
p. 125; 30 min.
- *Teacher's Manual*  
pp. 66–67
- *EL Adaptations Lesson 22*

**Connect**

This Connect is a good way to compare two rectangles that may look similar and to test if they are. Make sure all steps are clear.

**DIFFERENTIATION OPTIONS**

- **Support Coach**  
*Teacher's Manual*  
pp. 108–109, *POWER UP: Model Applications (A, B)*. 10 min.
- **Performance Coach**  
*Teacher's Edition*  
pp. 48–49, with *Lesson Practice section of Student Edition* p. 225. 10 min.
- **Readiness**

**LESSON FOCUS****Instruction Coach****Lesson 22: Understanding Similarity of Two-Dimensional Figures (Using Transformations)**

- *Student Edition*  
p. 126; 30 min.
- *Teacher's Manual*  
pp. 66–67
- *EL Adaptations Lesson 22*

**Practice Part 1**

Have students complete Questions 1–5 on SE p. 126. Read directions to students, and observe their work to ensure they are moving along correctly. Each question will require careful step-by-step movements to make sure all understand the motions used.

**DIFFERENTIATION OPTIONS**

- **Support Coach**  
*Teacher's Manual*  
pp. 108–109, *POWER UP: Practice and Assess*. *Extra challenge: Questions 8 and 9 on p. 127 of Instruction Coach Student Edition*. 20 min.
- **Performance Coach**  
*Teacher's Edition*  
pp. 48–49, with *Lesson Practice section of Student Edition* pp. 226–227. 20 min.
- **Readiness**

**LESSON FOCUS****Instruction Coach****Lesson 22: Understanding Similarity of Two-Dimensional Figures (Using Transformations)**

- *Student Edition*  
p. 127; 20 min.
- *Teacher's Manual*  
pp. 66–67
- *EL Adaptations Lesson 22*

**Practice Part 2**

Have students complete Questions 6–9 on SE p. 127. Each question will require careful step-by-step movements to make sure all understand the motions used. See p. 110 of *Support Coach Teacher's Manual* for a useful suggestion for EL.

**DIFFERENTIATION OPTIONS**

- **Support Coach**  
*Teacher's Manual*  
pp. 108–109, *POWER UP: Practice and Assess*. *Extra challenge: Questions 8 and 9 on p. 127 of Instruction Coach Student Edition*. 20 min.
- **Performance Coach**  
*Teacher's Edition*  
pp. 48–49, with *Lesson Practice section of Student Edition* p. 228. 20 min.
- **Readiness**

Waggle™

► Goal Dilations and Similarity

**Day 1**

**Day 2**

**Day 3**

**Day 4**

**Day 5**

► **Domain 4: Geometry**

**LESSON FOCUS**  
**Instruction Coach**

**Lesson 23: Extending Understanding of Angle Relationships**

- *Student Edition* p. 128; 20 min.
- *Teacher's Manual* pp. 68–69
- *EL Adaptations Lesson 23*

**Before the Lesson**

Many new ideas and words are here to introduce and demonstrate, so go over the list on p. 68 of *Instruction Coach Teacher's Manual*. Students need to hear each of these words spoken and clarified. Begin UNDERSTAND section as time permits.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 116–117, *POWER UP: Build Background*. 20 min.
- **Performance Coach Teacher's Edition** pp. 50–51, with *Getting the Idea* section of *Student Edition* pp. 229–230. 20 min.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**

**Lesson 23: Extending Understanding of Angle Relationships**

- *Student Edition* p. 128 30 min.
- *Teacher's Manual* pp. 68–69
- *EL Adaptations Lesson 23*

**Understand**

Carefully guide students through every step and every move of this page, making sure they understand the concepts, words, and symbols. You may need to coach students paragraph by paragraph.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 116–117, *POWER UP: Introduce and Model*. 10 min.
- **Performance Coach Teacher's Edition** pp. 50–51, with *Example 1* of *Student Edition* p. 231. 10 min.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**

**Lesson 23: Extending Understanding of Angle Relationships**

- *Student Edition* p. 129; 30 min.
- *Teacher's Manual* pp. 68–69
- *EL Adaptations Lesson 23*

**Connect**

Advise students to watch out for parallel and angle measure symbols. Make sure that angle identification with numbers is clear to students.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 116–117, *POWER UP: Model Application (A)*. 10 min.
- **Performance Coach Teacher's Edition** pp. 50–51, with *Example 2* of *Student Edition* pp. 232–234. 10 min.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**

**Lesson 23: Extending Understanding of Angle Relationships**

- *Student Edition* pp. 130–131; 30 min.
- *Teacher's Manual* pp. 68–69
- *EL Adaptations Lesson 23*

**Practice**

See p. 114 of *Support Coach Teacher's Manual* for a useful suggestion for EL. Read directions to students and observe their work to ensure they are moving along correctly.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 116–117, *POWER UP: Practice and Assess. Extra challenge: Questions 9 and 10* on p. 131 of *Instruction Coach Student Edition*. 10 min.
- **Performance Coach Teacher's Edition** pp. 50–51, with *Lesson Practice* section of *Student Edition* pp. 236–239. 10 min or as time permits.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**

**Lesson 24: Angles in Triangles**

- *Student Edition* p. 132; 30 min.
- *Teacher's Manual* pp. 70–71
- *EL Adaptations Lesson 24*

**Before the Lesson**

Go over vocabulary dealing with angles and triangles, from *acute*, *obtuse*, *straight*, and *right* to *vertex* and *opposite*. Make sure students have mastered the full meaning of each word. Begin UNDERSTAND section as time permits.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 118–121, *READY TO GO: Build Background*. 10 min.
- **Performance Coach Teacher's Edition** pp. 52–53, with *Getting the Idea* section and *Example 1* of *Student Edition* pp. 240–241. 10 min.
- **Readiness**

**Waggle™**

► **Goal** Angle Relationships

► **Goal** Angle Relationships

Day 1

Day 2

Day 3

Day 4

Day 5

## ► Domain 4: Geometry

**LESSON FOCUS****Instruction Coach****Lesson 24: Angles in Triangles**

- *Student Edition* p. 132; 30 min.
- *Teacher's Manual* pp. 70–71
- *EL Adaptations Lesson 24*

**Understand**

Note the new ideas and words, and “old” words such as *alternate interior*, *parallel*, and *transversal*. See note for EL on p. 122 of *Support Coach Teacher's Manual*.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 118–121, *READY TO GO: Introduce and Model*. 10 min.
- **Performance Coach Teacher's Edition** pp. 52–53, with Example 2 of *Student Edition* pp. 241–242. 10 min.
- **Readiness**

**LESSON FOCUS****Instruction Coach****Lesson 24: Angles in Triangles**

- *Student Edition* p. 133; 30 min.
- *Teacher's Manual* pp. 70–71
- *EL Adaptations Lesson 24*

**Connect**

See note for EL on p. 114 of *Support Coach Teacher's Manual*. Students need to be able to figure out problems such as those posed on this page. Offer additional practice.

(See reference below.)

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 118–121, *READY TO GO: Work Together (A, B)*. 10 min.
- **Performance Coach Teacher's Edition** pp. 52–53, with Examples 3–4 of *Student Edition* pp. 243–244. 10 min.
- **Readiness**

**LESSON FOCUS****Instruction Coach****Lesson 24: Angles in Triangles**

- *Student Edition* pp. 134–135; 30 min.
- *Teacher's Manual* pp. 70–71
- *EL Adaptations Lesson 24*

**Practice**

Explain and go over each section before moving on to the next section.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 118–121, *READY TO GO: Support Independent Practice (1–8)*. *Extra challenge: Questions 16 and 17 on p. 135 of Instruction Coach Student Edition*. 10 min.
- **Performance Coach Teacher's Edition** pp. 52–53, with Lesson Practice section of *Student Edition* pp. 245–250. 10 min or as time permits.
- **Readiness**

**LESSON FOCUS****Instruction Coach****Lesson 25: Explaining the Pythagorean Theorem**

- *Student Edition* p. 136; 20 min.
- *Teacher's Manual* pp. 72–73
- *EL Adaptations Lesson 25*

**Understand**

Concentrate on right triangles, acquainting students with all parts. Make sure students can identify all parts easily. This page introduces the Pythagorean Theorem written in its famous form, and its converse. Explain all steps on this page.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 122–123, *PLUG IN: Build Background*. 20 min.
- **Performance Coach Teacher's Edition** pp. 54–55, with *Getting the Idea* and examples 1–2 of *Student Edition* pp. 251–253. 20 min.
- **Readiness**

**LESSON FOCUS****Instruction Coach****Lesson 25: Explaining the Pythagorean Theorem**

- *Student Edition* p. 137; 30 min.
- *Teacher's Manual* pp. 72–73
- *EL Adaptations Lesson 25*

**Connect**

This page is an application of the Theorem. Offer additional opportunities for students to use the formula.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 122–123, *PLUG IN: Introduce Concepts and Vocabulary*. 10 min.
- **Performance Coach Teacher's Edition** pp. 54–55, with Example 3 of *Student Edition* p. 254. 10 min or as time permits.
- **Readiness**

Waggle™

► Goal Angle Relationships

► Goal Pythagorean Theorem



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► Domain 4: Geometry

**LESSON FOCUS**

**Instruction Coach**

**Lesson 25: Explaining the Pythagorean Theorem**

- *Student Edition* p. 138; 30 min.
- *Teacher's Manual* pp. 72–73
- *EL Adaptations Lesson 25*

**Example A**

Example A shows an application of the Theorem. See note for EL on p. 122 of *Support Coach Teacher's Manual*.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 122–123, PLUG IN: *Support Discussion*. 10 min.
- **Performance Coach Teacher's Edition** pp. 54–55, with Examples 5–6 of *Student Edition* pp. 256–257. 10 min or as time permits.
- **Readiness**

**LESSON FOCUS**

**Instruction Coach**

**Lesson 25: Explaining the Pythagorean Theorem**

- *Student Edition* p. 139; 30 min.
- *Teacher's Manual* pp. 72–73
- *EL Adaptations Lesson 25*

**Example B**

Example B is a problem dealing with the *converse* of the Theorem. Explain *converse*.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 122–123, PLUG IN: *Model Application (A)*. 10 min.
- **Performance Coach Teacher's Edition** pp. 54–55, with Example 4 of *Student Edition* p. 255. 10 min or as time permits.
- **Readiness**

**LESSON FOCUS**

**Instruction Coach**

**Lesson 25: Explaining the Pythagorean Theorem**

- *Student Edition* pp. 140–141; 30 min.
- *Teacher's Manual* pp. 72–73
- *EL Adaptations Lesson 25*

**Practice**

Review vocabulary and make sure students can define each one. Ask students to explain each word with the help of geometric models. Read and explain questions to make sure they are clearly understood.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 122–123, PLUG IN: *Practice and Assess*. 10 min.
- **Performance Coach Teacher's Edition** pp. 54–55, with *Lesson Practice of Student Edition* pp. 260–261. 10 min or as time permits.
- **Readiness**

**LESSON FOCUS**

**Instruction Coach**

**Lesson 26: Applying the Pythagorean Theorem in Two and Three Dimensions**

- *Teacher's Manual* pp. 74–75; 20 min.
- *EL Adaptations Lesson 26*

**Before the Lesson**

Review the Pythagorean Theorem along with all concepts and vocabulary associated with the theorem.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 124–125, *POWER UP: Build Background*. 20 min.
- **Performance Coach Teacher's Edition** pp. 54–55, with Example 7 of *Student Edition* p. 258. 20 min.
- **Readiness**

**LESSON FOCUS**

**Instruction Coach**

**Lesson 26: Applying the Pythagorean Theorem in Two and Three Dimensions**

- *Student Edition* p. 142; 30 min.
- *Teacher's Manual* pp. 74–75
- *EL Adaptations Lesson 26*

**Example A**

This page is an application of the Theorem. Offer additional opportunities to use the formula.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 124–125, *POWER UP: Model Application (A)*. 10 min.
- **Performance Coach Teacher's Edition** pp. 54–55, with *Coached Example of Student Edition* p. 259. 10 min.
- **Readiness**

Waggle™

► Goal Pythagorean Theorem

► Goal Pythagorean Theorem



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## ► Domain 4: Geometry

**LESSON FOCUS**  
**Instruction Coach****Lesson 26: Applying the Pythagorean Theorem in Two and Three Dimensions**

- *Student Edition* p. 143; 30 min.
- *Teacher's Manual* pp. 74–75
- *EL Adaptations Lesson 26*

**Example B**

This page is another application of the Theorem. Offer additional real world opportunities to use the formula.

**DIFFERENTIATION OPTIONS**

- **Support Coach**  
*Teacher's Manual*  
pp. 124–125, **POWER UP: Model Application (B)**. 10 min.
- **Performance Coach**  
*Teacher's Edition*  
pp. 54–55, with Lesson Practice of Student Edition p. 262. 10 min or as time permits.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach****Lesson 26: Applying the Pythagorean Theorem in Two and Three Dimensions**

- *Student Edition* p. 144; 20 min.
- *Teacher's Manual* pp. 74–75
- *EL Adaptations Lesson 26*

**Practice Part 1**

Review vocabulary and make sure students can define each word. Ask students to explain each word with the help of geometric figures. Read and explain Questions 1–5 to make sure they are clearly understood.

**DIFFERENTIATION OPTIONS**

- **Support Coach**  
*Teacher's Manual*  
pp. 124–125, **POWER UP: Practice and Assess. Extra challenge: Questions 8 and 9 on p. 145 of Instruction Coach**. 20 min.
- **Performance Coach**  
*Teacher's Edition*  
pp. 54–55, with Lesson Practice of Student Edition p. 263. 20 min or as time permits.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach****Lesson 26: Applying the Pythagorean Theorem in Two and Three Dimensions**

- *Student Edition* p. 145; 20 min.
- *Teacher's Manual* pp. 74–75
- *EL Adaptations Lesson 26*

**Practice Part 2**

Before proceeding to these questions, make sure your students understand the application of the Pythagorean Theorem. Read and explain Questions 6–9 to make sure they are clearly understood.

**DIFFERENTIATION OPTIONS**

- **Support Coach**  
*Teacher's Manual*  
pp. 124–125, **POWER UP: Practice and Assess. Extra challenge: Questions 8 and 9 on p. 145 of Instruction Coach**. 20 min.
- **Performance Coach**  
*Teacher's Edition*  
pp. 54–55, with Review of Lesson Practice of Student Edition pp. 260–263. 20 min or as time permits.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach****Lesson 27: Applying the Pythagorean Theorem on the Coordinate Plane**

- *Teacher's Manual* pp. 76–77; 20 min.
- *EL Adaptations Lesson 27*

**Before the Lesson**

Review the Pythagorean Theorem along with all concepts and vocabulary associated with the Theorem. Review finding the length of a horizontal or vertical segment on the coordinate plane.

**DIFFERENTIATION OPTIONS**

- **Support Coach**  
*Teacher's Manual*  
pp. 126–129, **READY TO GO: Build Background**. 20 min.
- **Performance Coach**  
*Teacher's Edition*  
pp. 56–57, with Getting the Idea section of Student Edition p. 264. 20 min.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach****Lesson 27: Applying the Pythagorean Theorem on the Coordinate Plane**

- *Student Edition* p. 146; 30 min.
- *Teacher's Manual* pp. 76–77
- *EL Adaptations Lesson 27*

**Example A**

This page is an application of the Theorem – computing the distance between any two points on a grid. Offer additional opportunities to use the formula. See Math Tools of *Instruction Coach* for Coordinate Plane.

**DIFFERENTIATION OPTIONS**

- **Support Coach**  
*Teacher's Manual*  
pp. 126–129, **READY TO GO: Introduce and Model**. 10 min.
- **Performance Coach**  
*Teacher's Edition*  
pp. 56–57, with Examples 1–3 of Student Edition pp. 265–267. 10 min or as time permits.
- **Readiness**

Waggle™

► Goal Pythagorean Theorem

► Goal Pythagorean Theorem

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► **Domain 4: Geometry**

**LESSON FOCUS**

**Instruction Coach**

**Lesson 27: Applying the Pythagorean Theorem on the Coordinate Plane**

- *Student Edition* p. 147; 30 min.
- *Teacher's Manual* pp. 76–77
- *EL Adaptations Lesson 27*

**Example B**

This page is another application of the Theorem. Offer additional opportunities to use the formula.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 126–129, *READY TO GO: Work Together (A)*. 10 min.
- **Performance Coach Teacher's Edition** pp. 56–57, with Example 4 of *Student Edition* pp. 268–269. 10 min or as time permits.
- **Readiness**

**LESSON FOCUS**

**Instruction Coach**

**Lesson 27: Applying the Pythagorean Theorem on the Coordinate Plane**

- *Student Edition* pp. 148–149; 30 min.
- *Teacher's Manual* pp. 76–77
- *EL Adaptations Lesson 27*

**Practice**

Read the questions if they are not clear.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 126–129, *READY TO GO: Support Independent Practice (1–8)*. *Extra challenge: Questions 11 and 12 on p. 149 of Instruction Coach*. 10 min.
- **Performance Coach Teacher's Edition** pp. 56–57, with Lesson Practice of *Student Edition* pp. 270–273. 10 min or as time permits.
- **Readiness**

**LESSON FOCUS**

**Instruction Coach**

**Lesson 28: Problem Solving: Volume**

- *Student Edition* pp. 150–151; 25 min.
- *Teacher's Manual* pp. 78–79
- *EL Adaptations Lesson 28*

**Soup Can and Carnival Treats**

Make sure students know the common three-dimensional figures. Reminder: Volume is measured in cubic units, such as cubic inches, cubic centimeters, etc. Recall what *p* means and how it is appears in the formulas. See Math Tools of *Instruction Coach* for Volume Formulas.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 132–133, *POWER UP: Model Application (A)*. 15 min.
- **Performance Coach Teacher's Edition** pp. 58–59, with *Getting the Idea* section and Examples 1–2 of *Student Edition* pp. 274–275. 15 min.
- **Readiness**

**LESSON FOCUS**

**Instruction Coach**

**Lesson 28: Problem Solving: Volume**

- *Student Edition* pp. 152–153; 25 min.
- *Teacher's Manual* pp. 78–79
- *EL Adaptations Lesson 28*

**Beach Ball and Tennis Balls in a Can**

See note for EL on p. 132 of *Instruction Support Coach Teacher's Manual*. See Math Tools of *Instruction Coach* for Volume Formulas.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 132–133, *POWER UP: Model Application (C)*. 15 min.
- **Performance Coach Teacher's Edition** pp. 58–59, with Examples 3–5 of *Student Edition* pp. 276–278. 15 min.
- **Readiness**

**LESSON FOCUS**

**Instruction Coach**

**Lesson 28: Problem Solving: Volume**

- *Student Edition* pp. 154–155; 20 min.
- *Teacher's Manual* pp. 78–79
- *EL Adaptations Lesson 28*

**Practice**

See Math Tools of *Instruction Coach* for Volume Formulas.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 132–133, *POWER UP: Practice and Assess*. 20 min.
- **Performance Coach Teacher's Edition** pp. 58–59, with Lesson Practice section of *Student Edition* pp. 280–283. 20 min or as time permits.
- **Readiness**

Waggle™

► **Goal** Pythagorean Theorem

► **Goal** Volume

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## ► Domain 4: Geometry

## ► Domain 5

**REVIEW AND ASSESS**  
**Instruction Coach**  
**Domain 4 Review**

- *Student Edition*  
pp. 156–157; 40 min.
- *Teacher's Manual*  
pp. 111–112

**Review Part 1**

Go over Questions 1–10 and discuss. Ask students to take a look at instructions on these pages, the first half of the Review. Make sure all instructions are clear. See Progression Chart on TM pp. 56–57 for a view of progressions connecting the lessons of Domain 4.

**DIFFERENTIATION OPTIONS**

- **Performance Coach Teacher's Edition**  
p. 60, with Domain 4 Review section of *Student Edition*  
pp. 284–285 as time permits.

**REVIEW AND ASSESS**  
**Instruction Coach**  
**Domain 4 Review**

- *Student Edition*  
pp. 158–159; 40 min.
- *Teacher's Manual*  
pp. 112–112

**Review Part 2 and Performance Task**

Go over Questions 11–14 and discuss. Pay special attention to the Performance Task on p. 159. Ask students to take a look at instructions on these pages, the second half of the Review. In particular, clarify any doubts with respect to Performance Task (*Proving the Pythagorean Theorem*) on p. 159. See Progression Chart on TM pp. 56–57 for a view of progressions connecting the lessons of Domain 4.

**DIFFERENTIATION OPTIONS**

- **Performance Coach Teacher's Edition**  
p. 60, with Domain 4 Review section of *Student Edition*  
pp. 286–288 as time permits.

**REVIEW AND ASSESS**  
**Instruction Coach**  
**Domain 4 Assessment**

- *Assessments* pp. 34–39; 40 min.
- *Assessments Answer Key*  
p. 12

**Assessment Part 1**

Have students complete Questions 1–20. Provide extra time for assessments and provide readers to read word problems to students.

**DIFFERENTIATION OPTIONS**

Provide extra time and assistance for students who qualify.

**REVIEW AND ASSESS**  
**Instruction Coach**  
**Domain 4 Assessment**

- *Assessments* pp. 40–43; 40 min.
- *Assessments Answer Key*  
pp. 12–14

**Assessment Part 2**

Have students complete Questions 21–25. Provide clear explanation of questions.

**DIFFERENTIATION OPTIONS**

Provide extra time and assistance for students who qualify.

**LESSON FOCUS**  
**Instruction Coach**  
**Lesson 29: Constructing and Interpreting Scatter Plots**

- *Teacher's Manual*  
pp. 82–83; 20 min.
- *EL Adaptations Lesson 29*

**Before the Lesson**

Review plotting graphs given a set of ordered pairs. Explain bivariate and outlier with examples. Begin UNDERSTAND section as time permits.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual**  
pp. 140–141, POWER UP: *Build Background*. 20 min.
- **Performance Coach Teacher's Edition**  
pp. 62–63, with *Getting the Idea* section of *Student Edition*  
pp. 292–293. 20 min.
- **Readiness**

Waggle™

► Goal Scatter Plots

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► **Domain 5: Statistics and Probability**

**LESSON FOCUS**  
**Instruction Coach**

**Lesson 29: Constructing and Interpreting Scatter Plots**

- *Student Edition* p. 162; 30 min.
- *Teacher's Manual* pp. 82–83
- *EL Adaptations Lesson 29*

**Understand**

Explain the idea of connecting two sets of data to determine if an association exists. Give simple examples such as age and height for school people. See p. 140 of *Support Coach Teacher's Manual* for a useful tip for EL.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 140–141, *POWER UP: Introduce and Model*. 10 min.
- **Performance Coach Teacher's Edition** pp. 62–63, with Example 1 of *Student Edition* p. 293. 10 min.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**

**Lesson 29: Constructing and Interpreting Scatter Plots**

- *Student Edition* p. 163; 30 min.
- *Teacher's Manual* pp. 82–83
- *EL Adaptations Lesson 29*

**Connect**

Slopes of straight lines can be positive and negative. Explain the meaning of a positive slope and a negative slope when creating scatter plots.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 140–141, *POWER UP: Model Application (A)*. 10 min.
- **Performance Coach Teacher's Edition** pp. 62–63, with Example 2 of *Student Edition* p. 294. 10 min.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**

**Lesson 29: Constructing and Interpreting Scatter Plots**

- *Student Edition* pp. 164–165; 20 min.
- *Teacher's Manual* pp. 82–83
- *EL Adaptations Lesson 29*

**Practice**

Help with each section of Practice, making sure instructions are clear. Explain each graph of Practice to make sure students know how to answer the questions.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 140–141, *POWER UP: Practice and Assess*. 20 min.
- **Performance Coach Teacher's Edition** pp. 62–63, with Example 3 of *Student Edition* p. 295. 20 min.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**

**Lesson 30: Modeling Relationships in Scatter with Straight Lines**

- *Student Edition* p. 166; 20 min.
- *Teacher's Manual* pp. 84–85
- *EL Adaptations Lesson 30*

**Before the Lesson**

Go over the concepts in the Before the Lesson. Explain a linear association, and both a positive and a negative linear association. Display examples of both. Begin UNDERSTAND section as time permits.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 142–145, *READY TO GO: Build Background*. 20 min.
- **Performance Coach Teacher's Edition** pp. 62–63, with Example 4 of *Student Edition* p. 296. 20 min.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**

**Lesson 30: Modeling Relationships in Scatter with Straight Lines**

- *Student Edition* p. 166; 20 min.
- *Teacher's Manual* pp. 84–85
- *EL Adaptations Lesson 30*

**Understand**

These pages illustrate two examples of *scatter plots*. On the UNDERSTAND page find a positive association (correlation) between number of sponsors and money raised. Explain *trend line* and *outlier*. Offer additional examples.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 142–145, *READY TO GO: Introduce Concepts and Vocabulary*. 20 min.
- **Performance Coach Teacher's Edition** pp. 62–63, with Example 5 of *Student Edition* p. 297. 20 min.
- **Readiness**

Waggle™

► **Goal** Scatter Plots

► **Goal** Scatter Plots

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## ► Domain 5: Statistics and Probability

**LESSON FOCUS****Instruction Coach****Lesson 30: Modeling Relationships in Scatter with Straight Lines**

- *Student Edition* p. 167; 30 min.
- *Teacher's Manual* pp. 84–85
- *EL Adaptations Lesson 30*

**Connect**

On the Connect page, find a negative association between pages in novels and times checked out of a library. Notice that the trend line here shows a negative slope, meaning a negative association between the two variables in contrast to graph in UNDERSTAND. Explore and contrast the two situations.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 142–145, *READY TO GO: Support Discussion*. 10 min.
- **Performance Coach Teacher's Edition** pp. 62–63, with Example 6 of *Student Edition* p. 298. 10 min.
- **Readiness**

**LESSON FOCUS****Instruction Coach****Lesson 30: Modeling Relationships in Scatter with Straight Lines**

- *Student Edition* pp. 168–169; 30 min.
- *Teacher's Manual* pp. 84–85
- *EL Adaptations Lesson 30*

**Practice**

Explain directions for all questions. Spend extra time going over Questions 8 and 9. See note on EL on p. 142 of *Support Coach Teacher's Manual*.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 142–145, *READY TO GO: Problem Solving*. 10 min.
- **Performance Coach Teacher's Edition** pp. 62–63, with Lesson Practice section of *Student Edition* pp. 300–303. 10 min or as time permits.
- **Readiness**

**LESSON FOCUS****Instruction Coach****Lesson 31: Using Linear Models to Interpret Data**

- *Teacher's Manual* pp. 86–87; 20 min.
- *EL Adaptations Lesson 31*

**Before the Lesson**

“Linear Models” means straight lines and the *slope-intercept* form of a straight line. Go over the meaning of  $y = mx + b$ , making sure students can go both ways: Graph of line on a grid to equation and from equation to graphing line. (We suggest old fashioned grid paper.) They should have a full understanding of *intercept* and *slope* using this equation.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 148–149, *POWER UP: Build Background*. 20 min.
- **Performance Coach Teacher's Edition** pp. 64–65, with *Getting the Idea* section and Example 1 of *Student Edition* pp. 304–305. 20 min.
- **Readiness**

**LESSON FOCUS****Instruction Coach****Lesson 31: Using Linear Models to Interpret Data**

- *Student Edition* p. 170; 20 min.
- *Teacher's Manual* pp. 86–87
- *EL Adaptations Lesson 31*

**Example A**

With knowledge of the *slope-intercept* form, students can take the graph of a line and write the equation. This also means inspecting a *trend line* to determine its equation, and from the equation, we have its *initial value* and its *slope*. Show every step of this example and add a few more *scatter plots* for analysis.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 148–149, *POWER UP: Support Discussion*. 20 min.
- **Performance Coach Teacher's Edition** pp. 64–65, with Examples 2–3 of *Student Edition* pp. 306–308. 20 min.
- **Readiness**

**LESSON FOCUS**

CCSS: 8.SP.3

**Instruction Coach****Lesson 31: Using Linear Models to Interpret Data**

- *Student Edition* p. 171; 20 min.
- *Teacher's Manual* pp. 86–87
- *EL Adaptations Lesson 31*

**Example B**

The *trend line* in Example B shows a downward movement, from left to right. This suggests that the slope will be negative. Check out the data to show students that as prices came down the number of orders went up. Carefully highlight each step—the calculation of  $m$  and  $b$ . These are the slope and  $y$ -intercept.

**DIFFERENTIATION OPTIONS**

- **Support Coach Teacher's Manual** pp. 148–149, *POWER UP: Model Application (A)*. 20 min.
- **Performance Coach Teacher's Edition** pp. 64–65, with Example 4 of *Student Edition* pp. 308–309. 20 min.
- **Readiness**

Waggle™

► Goal Scatter Plots

► Goal Scatter Plots



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► **Domain 5: Statistics and Probability**

**LESSON FOCUS**  
**Instruction Coach**

**Lesson 31: Using Linear Models to Interpret Data**

- *Student Edition*  
pp. 172–173; 30 min.
- *Teacher's Manual*  
pp. 86–87
- *EL Adaptations Lesson 31*

**Practice**

Prepare students for a variety of different questions in this Practice, all dealing with scatter diagrams and the straight line equation  $y = mx + b$ , which gives us *slope* and *intercept*, and from these we have information about the *trend*. Pay special attention to Questions 6 and 7.

**DIFFERENTIATION OPTIONS**

- **Support Coach**  
*Teacher's Manual*  
pp. 148–149, **POWER UP: Practice and Assess (1–4)**. 10 min.
- **Performance Coach**  
*Teacher's Edition*  
pp. 64–65, with *Lesson Practice* section of *Student Edition* pp. 311–313. 10 min or as time permits.
- **Readiness**  
*Student Edition* pp. 314–315. 10 min.

Waggle™

► **Goal** Scatter Plots

**LESSON FOCUS**  
**Instruction Coach**

**Lesson 32: Investigating Patterns of Association in Categorical Data**

- *Student Edition*  
p. 174; 30 min.
- *Teacher's Manual*  
pp. 88–89
- *EL Adaptations Lesson 32*

**Before the Lesson**

To prepare students for categorizing data, start a discussion about where students see data in categories – sports teams, most popular movies, population tables, etc. Make up several tables with local data, and ask about *frequency* and *relative frequency* of specific categories. Begin UNDERSTAND section as time permits.

**DIFFERENTIATION OPTIONS**

- **Make a Frequency Chart**  
Break class into groups, and ask each group to collect data on a single topic and make a frequency chart. Compare charts. 10 min.
- **Performance Coach**  
*Teacher's Edition*  
pp. 66–67, with *Getting the Idea* section and *Example 1* of *Student Edition* pp. 314–315. 10 min.
- **Readiness**

► **Goal** Two-Way Tables

**LESSON FOCUS**  
**Instruction Coach**

**Lesson 32: Investigating Patterns of Association in Categorical Data**

- *Student Edition*  
p. 174; 20 min.
- *Teacher's Manual*  
pp. 88–89
- *EL Adaptations Lesson 32*

**Understand**

The UNDERSTAND page shows a two-way *frequency table*. Make each part of this exercise clear – the collection of data, the calculation of percent, and what *relative frequency* means.

**DIFFERENTIATION OPTIONS**

- **Make a Frequency Table**  
Break class into groups, and ask each group to collect data and then produce a two-way frequency table. Ask for all computations as shown on UNDERSTAND page. Compare charts. 20 min.
- **Performance Coach**  
*Teacher's Edition*  
pp. 66–67, with *Examples 2–3* of *Student Edition* pp. 315–316. 20 min.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**

**Lesson 32: Investigating Patterns of Association in Categorical Data**

- *Student Edition*  
p. 175; 20 min.
- *Teacher's Manual*  
pp. 88–89
- *EL Adaptations Lesson 32*

**Connect**

Point out that a two-way *frequency table* is another way to show associations between two categories. In the Understand page, we saw an association between boy and girls and their agreement on a school issue. In Connect, explain the association between curfews and bedtimes. Compare *scatter plots* and *two-way tables* as ways of showing associations, and the virtues/deficits of each.

**DIFFERENTIATION OPTIONS**

- **Discuss Association**  
Use the two-way tables from the previous day to discuss any associations. Break class into groups, and discuss the degree of association on their two-way tables. 20 min.
- **Performance Coach**  
*Teacher's Edition*  
pp. 66–67, with *Examples 4–5* of *Student Edition* pp. 317–319. 20 min.
- **Readiness**

**LESSON FOCUS**  
**Instruction Coach**

**Lesson 32: Investigating Patterns of Association in Categorical Data**

- *Student Edition*  
pp. 176–177; 30 min.
- *Teacher's Manual*  
pp. 88–89
- *EL Adaptations Lesson 32*

**Practice**

Read the directions to students as needed. Prepare students for each of the four sections of this Practice.

**DIFFERENTIATION OPTIONS**

- **Discuss the Practice**  
Break class into groups to discuss results of Questions 1–11. Save questions 12 and 13 for the next day. 10 min.
- **Performance Coach**  
*Teacher's Edition*  
pp. 66–67, with *Lesson Practice* section of *Student Edition* pp. 321–325. 10 min or as time permits.
- **Readiness**



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## ► Domain 5: Statistics and Probability

## ► End of Year Review

**REVIEW AND ASSESS**  
**Instruction Coach**  
**Domain 5 Review**

- *Student Edition*  
pp. 178–179; 40 min.
- *Teacher's Manual* p. 115

**Review Part 1**

Go over Questions 1–6 and discuss. Ask students to take a look at instructions for the first half of the Review. Make sure all instructions are clear. See Progression Chart on TM pp. 80–81 for a view of progressions connecting the lessons of Domain 5.

**DIFFERENTIATION OPTIONS**

- **Performance Coach Teacher's Edition**  
p. 68 with Domain 5 Review of Student Edition pp. 326–328 as time permits.

**REVIEW AND ASSESS**  
**Instruction Coach**  
**Domain 5 Review**

- *Student Edition*  
pp. 179–181; 40 min.
- *Teacher's Manual* p. 115

**Review Part 2 and Performance Task**

Ask students to take a look at instructions for the second half of the Review, Questions 7–10 on SE pp. 179–180. In particular, clarify any doubts with respect to Performance Task (*Exploring Variables*) on p. 181. See Progression Chart on TM pp. 80–81 for a view of progressions connecting the lessons of Domain 5.

**DIFFERENTIATION OPTIONS**

- **Performance Coach Teacher's Edition**  
p. 68 with Domain 5 Review of Student Edition pp. 329–330 as time permits.

**REVIEW AND ASSESS**  
**Instruction Coach**  
**Domain 5 Assessment**

- *Assessments* pp. 44–52; 40 min.
- *Assessments Answer Key* p. 15

**Assessment Part 1**

Have students complete Questions 1–15. Provide extra time for assessments and provide readers to read word problems to students.

**DIFFERENTIATION OPTIONS**

Provide extra time and assistance for students who qualify.

**REVIEW AND ASSESS**  
**Instruction Coach**  
**Domain 5 Assessment**

- *Assessments* pp. 53–57; 40 min.
- *Assessments Answer Key* pp. 15–17

**Assessment Part 2**

Have students complete Questions 16–20. Provide clear explanation of questions.

**DIFFERENTIATION OPTIONS**

Provide extra time and assistance for students who qualify.

**END OF YEAR REVIEW**  
**Instruction Coach**  
**Review Domains 1–3**  
**Lessons 1–17****Support Coach Practice Tests 1 & 2**

- *Assessments* pp. 64–101
- *Assessments Answer Key* pp. 26–38

Select key questions from Practice Tests 1 and 2 to review with students depending on their needs.

**DIFFERENTIATION OPTIONS**

- **Support Coach Assessments**  
pp. 44–55 for Performance Tasks A & B in Domains 1–3.

Day 1

Day 2

Day 3

Day 4

Day 5

► End of Year Review

**END OF YEAR REVIEW**  
**Instruction Coach**  
**Review Domains 4 and 5**  
**Lessons 18–32**

**Support Coach Practice Tests 1 & 2**

- *Assessments pp. 64–101*
- *Assessments Answer Key pp. 26–38*

Select key questions from Practice Tests 1 and 2 to review with students depending on their needs.

**DIFFERENTIATION OPTIONS**

- **Support Coach Assessments**  
*pp. 56–61 for Performance Tasks A & B in Domains 4 and 5.*

**SUMMATIVE ASSESSMENT**  
**Instruction Coach**

- *Assessments pp. 58–67; 40 min.*
- *Assessments Answer Key p. 18*

**Assessment Part 1**

Have students complete Questions 1–25. Provide extra time for assessments and provide readers to read word problems to students.

**DIFFERENTIATION OPTIONS**

Provide extra time and assistance for students who qualify.

**SUMMATIVE ASSESSMENT**  
**Instruction Coach**

- *Assessments pp. 67–76; 40 min.*
- *Assessments Answer Key pp. 18–19*

**Assessment Part 2**

Have students complete Questions 26–50. Provide extra time for assessments and provide readers to read word problems to students.

**DIFFERENTIATION OPTIONS**

Provide extra time and assistance for students who qualify.