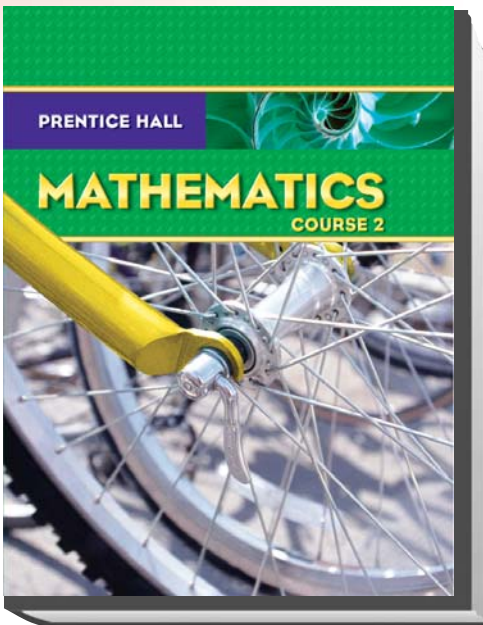


# Prentice Hall

*Mathematics, Course 2* © 2008



C O R R E L A T E D T O  
Kentucky Combined Curriculum Standards  
Grade 7

PEARSON

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***Prentice Hall Mathematics, Course 2 Program Organization***

*Prentice Hall Mathematics* supports student comprehension of the mathematics by providing well organized sequence of the content, structure of the daily lesson, systematic direct instruction, and teacher support provided for each lesson.

**Content Sequence** - Prentice Hall is organized with the goal of addressing all of the mathematics standards through direct and effective instruction, building concept upon concept, skill upon skill in an order that is pedagogically sound. The Table of Contents shows the smooth flow of the book, with prerequisite skills and concepts presented before the more complex topics that depend on them.

**Starting the Chapter** - Every chapter begins by reviewing the previous standards that have been learned and overviewing the standards that will be covered in the chapter. New Vocabulary is identified to prepare students for the chapter. Finally, *Check Your Readiness* questions assess student understanding of necessary prerequisite skills and identifies which lesson they can go to for any necessary remediation.

**Lesson Organization** - The daily lesson is structured and presented in a consistent format that enables teachers to effectively present the content and monitor student understanding.

- The **Instant Check System** is a system of assessments that helps ensure standards mastery. It is comprised of assessments to use before, during, and after instruction so teachers can easily and effectively monitor student understanding.
  - Each lesson begins with *Check Skills You'll Need* to ensure students have the necessary prerequisite skills for success in the lesson. A Go for Help reference directs them to a previous lesson if remediation is necessary.
  - *Check Skills* questions after every single example provide a way to check student understanding during instruction.
  - Finally, *Checkpoint Quizzes* occur after instruction to continually monitor student progress.
- **Daily Standards Practice** is provided with a comprehensive exercise set following every lesson. Each exercise set is leveled to ensure a variety of practice. **Test Prep and Mixed Review** ensures students also have a daily opportunity to practice concepts and skills previously mastered.

**Concluding the Chapter** - The following features conclude each chapter, providing opportunities for students to review all standards and demonstrate mastery. This part of the systematic instruction provides regular opportunities for review and practice and ensures focus on and mastery of the standards.

- **Chapter Review** - The Chapter Review serves as a chapter study guide for students by reviewing the key concepts covered in each lesson and providing an opportunity to practice. In addition, key vocabulary is reviewed.
- **Chapter Test** - Students demonstrate their understanding of the entire chapter by completing this practice chapter test.
- **Test Prep Cumulative Practice** - This provides a regular opportunity for students to practice and demonstrate mastery of all the standards that have been covered. If remediation is necessary, students are directed to a previous lesson where each concept was taught.

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**Assessment**

*Prentice Hall Mathematics* provides teachers with the assessment tools needed to inform instruction and document student progress.

The **Progress Monitoring Assessments** contains all the program assessments needed to evaluate student understanding, monitor student progress, and inform future instruction. The following assessments are included:

- **Formative Assessments**
  - Screening Test – check student readiness at the beginning of the school year
  - Benchmark Tests – monitor student progress
  - Test-Taking Strategy Practice Masters – provide opportunities to improve problem-solving skills
- **Summative Assessments** – *All the summative assessments are provided in two forms – on-level and basic versions. Both forms fully assess student progress on the course content, but the basic versions have been modified for special needs students.*
  - Quarter Tests – on-level and basic versions
  - Mid-Course Tests – on-level and basic versions
  - Final Tests – on-level and basic versions

The **Test Preparation Workbook** contains review lessons and multiple-choice practice tests.

Technology, such as the **ExamView® CD-ROM**, allows teachers to create customized assessment, with all test items correlated to state standards.

**Universal Access**

*Prentice Hall Mathematics* provides better solutions for meeting the needs of every student in the classroom. Universal Access can be fostered by modifying instruction to address individual needs, and provided adapted resources when appropriate. Prentice Hall uses a systematic method for labeling and identifying resources and instructional support. This consistency helps teachers easily identify and choose the appropriate support for specific populations of students. The Teacher's Edition provides universal access strategies in detailed daily lesson plans, and daily teaching notes to help differentiate the lesson for all learners, including special needs, below level, advanced and English Language Learners. Chapter-level support pages provide teachers with an easy-to-read overview of the chapter resources available and suggest ways in the instructional lesson to use the resources. Key ancillaries to support universal access include the All-in-One Teaching Resources and the All-in-One Student Workbooks. The Teaching Resources include leveled practice for every lesson and daily activity labs. The All-in-One Student Workbook, available as both on-level and adapted for special needs, includes daily notetaking, daily practice, daily guided problem solving, and vocabulary support.

**Instructional Planning and Support**

*Prentice Hall Mathematics* is designed to provide teachers the tools needed to effectively and easily implement the program in the classroom.

**A Road Map for Planning the Year** - A Leveled Pacing Chart is provided in the Teacher's Edition that lays out a plan for teaching all the mathematics content standards. It suggests time to spend on each Chapter, and offers support for adjusting the instruction to meeting the pacing needs of all students.

**Planning a Chapter** - The Teacher's Edition begins each chapter with a series of planning pages. These pages provide an overview of the chapter and make it easy to determine how to individualize lessons for specific students.

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**Planning Daily Instruction** - Teachers can use a variety of program materials to organize their teaching. The primary planning tools are the Teacher's Edition and the Teacher Center Planning CD-ROM. The Teacher's Edition includes step-by-step, daily support for directing instruction. Support is organized systematically around a 4-step teaching plan of Plan, Teach, Practice, and Assess/Reteach.

**Instructional Tools to Plan, Teach, and Assess:**

- **Core Components**
  - **Student Edition** – Thorough coverage of the standards, with built-in assessments and ongoing student support
  - **Teacher's Edition** – Provides comprehensive support for planning, teaching, and providing Universal Access
- **Teacher Support**
  - **All-in-One Teaching Resources** - All teaching resources are in one convenient place. Includes leveled practice, chapter projects, alternative assessments, cumulative reviews, guided problem solving masters, and vocabulary support.
  - **Progress Monitoring Assessments** – Provides support for formative and summative assessment, with comprehensive resources for monitoring progress on the standards.
  - **Test Preparation Workbook** – Provides instruction and practice on specific test taking strategies.
  - **TeacherEXPRESS CD-ROM** – Powerful lesson planning software, Teacher's Edition, and Teaching Resources.
  - **PresentationEXPRESS CD-ROM** – Complete support for digital presentations of lessons including videos, activities, stepped-out examples, quick check assessments, online active math, and Mindpoint Quiz Show to review chapters.
  - **ExamView Test Generator CD-ROM** – Allows teachers to quickly and easily generate tests correlated to the standards.
- **Student Support**
  - **All-in-One Student Workbook** –
    - Structured daily notetaking pages for every lesson
    - Practice for every lesson
    - Guided problem solving pages for every lesson with scaffolded questions
    - Vocabulary and study skills focusing on key mathematical vocabulary
  - **All-in-One Student Workbook, Adapted Version** – Adapted for special needs students. Includes all the resources in the regular All-in-One Student Workbooks, in an adapted form.
  - **Student Text Online** – Complete interactive textbook with videos built-in at point-of-use, digital activities, stepped-out examples, vocabulary support – and more. Also includes the All-in-One Student Workbooks.
  - **StudentEXPRESS CD-Rom** – Interactive Textbook, Homework Video Tutors, Active Math Interactivities and Student Worksheets
  - **Companion Websites** - Grants instant access to a wealth of resources to support learning including vocabulary quizzes, lesson quizzes, data updates, tutorials, chapter tests, and homework video tutors.
- **Transparency Package**
  - **Classroom Aid Transparencies** - Full-color multi-use transparencies such as graphs, fraction strips, and manipulatives
  - **Additional Examples on Transparencies**
  - **Daily Skills Check and Lesson Quiz Transparencies**
  - **Standards Review Transparencies**
  - **Student Edition Answers on Transparencies**

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KENTUCKY COMBINED CURRICULUM STANDARDS, GRADE 7	PAGE(S) WHERE TAUGHT (If submission is not a text, cite appropriate resource(s))
<p><b>Big Idea: Number Properties and Operations</b> Middle grades students understand fractions, decimals, percents and integers, compare them and locate their relative positions on a number line. They develop and use proportional reasoning to solve problems. They work with large numbers and small numbers. They use factors, multiples and prime factorizations. They perform arithmetic operations with fractions, decimals and integers, use properties in computation, develop fluency and develop strategies to estimate the result of operations on rational numbers.</p> <p><b>Academic Expectations</b>  <b>2.7</b> Students understand number concepts and use numbers appropriately and accurately.  <b>2.8</b> Students understand various mathematical procedures and use them appropriately and accurately.</p>	
<b>Program of Studies: Understandings</b>	
<b>Related Core Content for Assessment</b>	
<b>MA-7-NPO-U-1</b> Students will understand that numbers, ways of representing numbers, relationships among numbers and number systems are means of representing real-world quantities.	
<b>Program of Studies: Skills and Concepts</b>	
<b>MA-7-NPO-S-NS1</b> Students will extend number sense for percents and integers.	<b>SE/TE:</b> 31-33, 274-277, 279-282, 284-287, 484
<b>MA-7-NPO-S-NS3</b> Students will develop number sense for $\pi$ (pi) as one example of an irrational number.	<b>SE/TE:</b> 394-396
<b>MA-7-NPO-S-NS4</b> Students will use whole number exponents to represent/express numbers.	<b>SE/TE:</b> 68-71, 110, 112
<b>MA-7-NPO-S-NS6</b> Students will provide examples of and use models, diagrams and symbols (e.g., number lines, 10 by 10 grids, rectangular arrays, number sentences) to describe and write equivalent forms of integers, fractions, decimals, percents, square roots and $\pi$ .	<b>SE/TE:</b> 31-33, 61, 68-71, 82-85, 91-94, 95, 96-100, 102-105, 110, 112, 274-277, 279-282, 284-287, 484
<b>Related Core Content for Assessment</b>	
<b>MA-07-1.1.1</b> <b>Students will provide examples of and identify integers, fractions, decimals, percents and <math>\pi</math>.</b> <b>DOK 1</b>	<b>SE/TE:</b> 31-33, 61, 68-71, 82-85, 91-94, 95, 96-100, 102-105, 110, 112, 274-277, 279-282, 284-287, 484

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<p><i>MA-07-1.1.2</i>  <i>Students will describe and provide examples of representations of numbers (whole numbers, fractions, decimals, percents, integers, square roots, and <math>\pi</math>) and operations in a variety of equivalent forms using models, diagrams, and symbols (e.g., number lines, 10 by 10 grids, rectangular arrays, number sentences), based on real-world and mathematical problems.</i></p>	<p><b>SE/TE:</b> 31-33, 61, 68-71, 82-85, 91-94, 95, 96-100, 102-105, 110, 112, 274-277, 279-282, 284-287, 484</p>
<p><b>MA-07-1.1.3</b>  <b>Students will convert among whole numbers, fractions, decimals, percents and <math>\pi</math>, and will compare and order these numbers.</b>  <b>DOK 2</b></p>	<p><b>SE/TE:</b> 68-71, 86, 87-88, 95, 98, 101, 102-105, 113, 274-277, 279-283, 284-287, 290-293, 298-301, 302-303, 304-307, 309, 316, 580</p>
<b>Program of Studies: Understandings</b>	
<p><b>MA-7-NPO-U-2</b>            Students will understand that meanings of and relationships among operations provide tools necessary to solve realistic problems encountered in everyday life.</p>	<p><b>SE/TE:</b> 50-51, 61, 152, 181-183, 186-189, 210-213</p>
<b>Program of Studies: Skills and Concepts</b>	
<p><b>MA-7-NPO-S-NS5</b>            Students will compare, order and determine equivalent relationships among fractions, decimals and percents.</p>	<p><b>SE/TE:</b> 7, 11, 86-90, 98-99, 101, 103, 104, 113, 166, 226, 279-283, 316, 434, 530, 578</p>
<p><b>MA-7-NPO-S-NO1</b>            Students will develop addition, subtraction, multiplication and division of integers both concretely and symbolically (mental, pencil and paper, calculators).</p>	<p><b>SE/TE:</b> 36-37, 38-42, 43-47, 51, 61, 66, 118, 166, 177</p>
<p><b>MA-7-NPO-S-NO2</b>            Students will extend concepts and application of operations with fractions and decimals to include percents.</p>	<p><b>SE/TE:</b> 290-293, 294-297, 298-301, 302-303, 304-307, 308, 310-314, 316-317</p>
<p><b>MA-7-NPO-S-NO3</b>            Students will add, subtract, multiply, divide and apply order of operations (including positive whole number exponents) with fractions, decimals and integers to solve real-world problems.</p>	<p><b>SE/TE:</b> 10-11, 16-17, 22-23, 24-25, 40-42, 43, 46-47, 50-51, 128-129, 132-133, 138-139, 144-145, 146-147</p>
<p><b>MA-7-NPO-S-NO4</b>            Students will explain inversely-related operations (addition and subtraction; multiplication and division).</p>	<p><b>SE/TE:</b> 181, 186, 188, 210, 221</p>

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<p><b>MA-7-NPO-S-PNO1</b> Students will identify, explain and apply properties (e.g., commutative, associative, inverse and identity for addition and multiplication; distributive).</p>	SE/TE: 9-10, 15-17, 52, 60
<p><b>MA-7-NPO-S-PNO2</b> Students will identify and apply prime numbers, composite numbers, prime factorization, factors, multiples and divisibility to solve real-world problems (e.g., use prime factorization to determine a least common multiple [LCM] or greatest common factor [GCF]).</p>	SE/TE: 73, 74-78, 80-81, 83, 84, 111, 112, 118, 131
<b>Related Core Content for Assessment</b>	
<p><i>MA-07-1.3.2</i> <i>Students will explain how operations (addition and subtraction; multiplication and division) are inversely related.</i></p>	SE/TE: 181, 186, 188, 210, 221
<p><i>MA-07-1.3.3</i> <i>Students will add and subtract integers.</i></p>	SE/TE: 36-37, 38-42, 61, 118, 177
<p><b>MA-07-1.5.1</b> <b>Students will identify and apply prime numbers, composite numbers, prime factorization, factors, multiples and divisibility to solve real-world and mathematical problems (e.g., prime factorization to determine a least common multiple [LCM] or greatest common factor [GCF]).</b> <b>DOK 2</b></p>	SE/TE: 73, 74-78, 80-81, 83, 84, 111, 112, 118, 131
<p><b>MA-07-1.5.2</b> <b>Students will identify the use of properties (commutative properties of addition and multiplication, the associative properties of addition and multiplication and the identity properties for addition and multiplication) to justify a given step in solving problems.</b> <b>DOK 1</b></p>	SE/TE: 9-10, 15-17, 52, 60
<b>Program of Studies: Understandings</b>	
<p><b>MA-7-NPO-U-3</b> Students will understand that computing fluently and making reasonable estimates with fractions, decimals and whole numbers increases the ability to solve realistic problems encountered in everyday life.</p>	SE/TE: 4-7, 8, 12, 14, 20, 120-123, 126, 130, 136, 141, 146-147

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<b>Program of Studies: Skills and Concepts</b>	
<b>MA-7-NPO-S-NS2</b> Students will extend applications of operations (+, -, ×, ÷) to include integers.	<b>SE/TE:</b> 36-37, 38-42, 43, 44-47, 61
<b>MA-7-NPO-S-E1</b> Students will estimate and mentally compute to solve real-world and/or mathematical problems with fractions, decimals, percents and integers, checking for reasonable and appropriate computational results.	<b>SE/TE:</b> 4-7, 8, 9, 10, 12, 14, 15, 16, 23, 48, 49, 50, 55, 62, 78, 93, 127, 129, 130-131, 133, 137, 139, 142, 143, 184, 202, 233, 246, 268, 272, 280, 282, 285, 286, 299, 302, 306, 329, 384, 423, 446, 448, 462, 506, 512, 517, 522, 588
<b>MA-7-NPO-S-E2</b> Students will estimate large and small quantities of objects.	<b>SE/TE:</b> 26, 29, 423, 554-556
<b>MA-7-NPO-S-NO3</b> Students will add, subtract, multiply, divide and apply order of operations (including positive whole number exponents) with fractions, decimals and integers to solve real-world problems.	<b>SE/TE:</b> 10-11, 16-17, 22-23, 24-25, 40-42, 43, 46-47, 50-51, 128-129, 132-133, 138-139, 144-145, 146-147
<b>Related Core Content for Assessment</b>	
<b>MA-07-1.2.1</b> <b>Students will estimate to solve real-world and mathematical problems with fractions, decimals and percents, checking for reasonable and appropriate computational results.</b> <b>DOK 2</b>	<b>SE/TE:</b> 4-7, 8, 12, 14, 127, 130-131, 137, 142, 233, 272, 280, 285, 299, 302, 329, 384, 423, 446, 462
<b>MA-07-1.3.1</b> <b>Students will add, subtract, multiply and divide whole numbers, fractions and decimals to solve real-world problems and apply order of operations (including positive whole number exponents) to simplify numerical expressions.</b> <b>DOK 2</b>	<b>SE/TE:</b> 2, 8-11, 12, 13, 14-17, 19, 20-23, 36-37, 38-41, 43, 44-47, 48-51, 61, 66, 68-71, 72, 118, 130-133, 135, 136-139, 140, 141-145, 160, 656-657, 661-663, 665-666
<b>Program of Studies: Understandings</b>	
<b>MA-7-NPO-U-4</b> Students will understand that proportional reasoning is a tool for modeling and solving problems encountered in everyday situations.	<b>SE/TE:</b> 230-231, 232-235, 236, 240-241, 242, 243, 244-248, 249-250, 252-255, 258, 259-263, 264, 266-267, 274, 276-277, 279-283, 284-287, 289, 292-293, 294-297, 298-301, 302-303, 304-307, 310-314, 316-317
<b>Program of Studies: Skills and Concepts</b>	
<b>MA-7-NPO-S-RP1</b> Students will compute percentages and use percentages in proportional reasoning.	<b>SE/TE:</b> 294-297, 317



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<b>MA-7-NPO-S-RP2</b> Students will determine and solve proportions in real-world and mathematical situations.	<b>SE/TE:</b> 229-231, 232-235, 236, 240-241, 242, 243, 244-248, 249-250, 252-255, 258, 259-263, 264, 266-267, 274, 276-277, 279-283, 284-287, 289, 292-293, 294-297, 298-301, 302-303, 304-307, 310-314, 316-317
<b>MA-7-NPO-S-RP3</b> Students will develop proportional reasoning and apply to real-world and mathematical problems (e.g., rates, scaling, similarity).	<b>SE/TE:</b> 230-231, 232-235, 236, 240-241, 242, 243, 244-248, 249-250, 252-255, 258, 259-263, 264, 266-267, 274, 276-277, 279-283, 284-287, 289, 292-293, 294-297, 298-301, 302-303, 304-307, 310-314, 316-317
<b>Related Core Content for Assessment</b>	
<b>MA-07-1.4.1</b> <b>Students will apply ratios and proportional reasoning to solve real-world problems (e.g., percents, sales tax, discounts, rate).</b> <b>DOK 3</b>	<b>SE/TE:</b> 229-231, 232-235, 236, 240-241, 242, 243, 244-248, 249-250, 252-255, 258, 259-263, 264, 266-267, 274, 276-277, 279-283, 284-287, 289, 292-293, 294-297, 298-301, 302-303, 304-307, 310-314, 316-317
<b>Big Idea: Measurement</b> Students continue to measure and estimate measurements including fractions and decimals. They use formulas to find perimeter, area, circumference and volume. They use rulers and protractors. They use US Customary and metric units of measurement. <b>Academic Expectations</b> <b>2.10</b> Students understand measurement concepts and use measurements appropriately and accurately. <b>2.11</b> Students understand mathematical change concepts and use them appropriately and accurately.	
<b>Program of Studies: Understandings</b>	
<b>MA-7-M-U-1</b> Students will understand that there are two major measurement systems (U.S. Customary and metric) and either may be used to solve problems.	<b>SE/TE:</b> 26-30, 61, 148-151, 153, 158, 161
<b>Program of Studies: Skills and Concepts</b>	
<b>MA-7-M-S-SM1</b> Students will describe and provide examples of U.S. Customary and metric units of measurement; use these units to solve real-world and/or mathematical problems.	<b>SE/TE:</b> 26-30, 61, 148-151, 153
<b>Program of Studies: Understandings</b>	
<b>MA-7-M-U-2</b> Students will understand that measurable attributes of objects and the units, systems and processes of measurement are powerful tools for making sense of the world around them.	<b>SE/TE:</b> 26-30, 61, 148-151, 153, 158, 161

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<p><b>MA-7-M-U-3</b>  Students will understand that measurements are determined by using appropriate techniques, tools, formulas and degree of accuracy needed for the situation.</p>	<p><b>SE/TE:</b> 26-30, 61, 148-151, 153, 154-157, 158, 161</p>
<b>Program of Studies: Skills and Concepts</b>	
<p><b>MA-7-M-S-MPA1</b>  Students will read and use measurement tools (e.g., rulers, scales, protractors, angle rulers)</p>	<p><b>SE/TE:</b> 154-157, 329</p>
<p><b>MA-7-M-S-MPA2</b>  Students will estimate and find angle measures and segment measures</p>	<p><b>SE/TE:</b> 157, 329, 330-334</p>
<p><b>MA-7-M-S-MPA3</b>  Students will estimate and find circle measurements in standard units (radius, diameter, circumference, area) and relationships among them</p>	<p><b>SE/TE:</b> 393, 394-397, 429</p>
<p><b>MA-7-M-S-MPA4</b>  Students will develop and use the formulas for area of a triangle, a parallelogram and a trapezoid and relate each to the formula for the area of a rectangle (<math>b \times h</math>).</p>	<p><b>SE/TE:</b> 379, 380-383, 385-387, 388-392, 428</p>
<p><b>MA-7-M-S-MPA5</b>  Students will determine the length of sides (to the nearest eighth of an inch or nearest centimeter), area and perimeter of triangles, quadrilaterals (rectangles, squares, trapezoids) and other polygons. (Using the Pythagorean theorem will not be required as a strategy).</p>	<p><b>SE/TE:</b> 379, 380-383, 385-387, 388-392, 428</p>
<p><b>MA-7-M-S-MPA6</b>  Students will explain how measurements and measurement formulas are related or different (e.g., perimeter and area of rectangles).</p>	<p><b>SE/TE:</b> 374-378, 382, 383, 384-387</p>
<p><b>MA-7-M-S-MPA7</b>  Students will investigate and demonstrate fixed area with changing perimeter and fixed perimeter with changing area.</p>	<p><b>SE/TE:</b> 382, 383, 386, 387, 392</p>

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<b>Related Core Content for Assessment</b>	
<p><b>MA-07-2.1.1</b>                      Students will measure lengths (to the nearest eighth of an inch or the nearest centimeter) and will determine and use in real-world and mathematical problems:</p> <ul style="list-style-type: none"> <li>• area and perimeter of triangles;</li> <li>• area and perimeter of quadrilaterals (rectangles, squares, trapezoids) (using the Pythagorean theorem will not be required as a strategy);</li> <li>• area and circumference of circles and</li> <li>• area and perimeter of compound figures composed of triangles, quadrilaterals and circles.</li> </ul> <p><b>DOK 2</b></p>	<p><b>SE/TE:</b> 154-157, 374-378, 379, 380-383, 384-387, 388-392, 394-397, 398-399, 400, 416, 428-429, 451, 490, 495</p>
<p><i>MA-07-2.1.2</i>                      Students will estimate measurements of regular and irregular polygons and circles in standard units.</p>	<p><b>SE/TE:</b> 374-378, 428</p>
<p><i>MA-07-2.1.3</i>                      Students will explain how measurements and measurement formulas are related or different (e.g., perimeter and area of rectangles).</p>	<p><b>SE/TE:</b> 379, 380-381, 384-385, 388-390</p>
<p><i>MA-07-2.1.4</i>                      Students will find the measures of angles by estimation and measurement with a protractor or angle ruler.</p>	<p><b>SE/TE:</b> 329, 331-334, 372</p>
<p><i>MA-07-2.2.1</i>                      Students will convert units within the same measurement system and use these units to solve real-world problems.</p>	<p><b>SE/TE:</b> 26-30, 47, 61, 148-151, 161, 236, 667-669, 670</p>

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<p><b>Big Idea: Geometry</b> Middle grade students expand analysis of two-dimensional shapes and three-dimensional shapes. They translate shapes in a coordinate plane. They extend work with congruent and similar figures, including proportionality.</p> <p><b>Academic Expectation</b></p> <p><b>2.8</b> Students understand various mathematical procedures and use them appropriately and accurately.</p> <p><b>2.9</b> Students understand space and dimensionality concepts and use them appropriately and accurately.</p>	
<b>Program of Studies: Understandings</b>	
<p><b>MA-7-G-U-1</b> Students will understand that characteristics and properties of two-dimensional figures and three-dimensional objects describe the world and are used to develop mathematical arguments about geometric relationships and to evaluate the arguments of others.</p>	<p><b>SE/TE:</b> 335, 336-339, 340-344, 350-353, 366-367, 409, 410-413, 419, 429</p>
<b>Program of Studies: Skills and Concepts</b>	
<p><b>MA-7-G-S-SR1</b> Students will describe, provide examples of and identify (using correct notation, label and name) the basic geometric elements (e.g., points, segments, rays, lines, angles and planes), including both real world and/or mathematical situations.</p>	<p><b>SE/TE:</b> 324-327, 328, 330-334, 336</p>
<p><b>MA-7-G-S-SR2</b> Students will identify characteristics of angles (e.g., adjacent, vertical, corresponding, interior, exterior).</p>	<p><b>SE/TE:</b> 330-334, 366</p>
<p><b>MA-7-G-S-SR3</b> Students will identify properties for classifying, describe, provide examples of and identify elements (e.g., sides, vertices, angles, congruent parts) of two-dimensional figures (circles, triangles [acute, right, obtuse, scalene, isosceles, equilateral], quadrilaterals [square, rectangle, rhombus, parallelogram, trapezoid], regular and irregular polygons); apply properties of these figures to solve real-world problems.</p>	<p><b>SE/TE:</b> 335, 336-339, 340-344, 350-353, 366-367</p>
<p><b>MA-7-G-S-SR4</b> Students will describe, provide examples of and identify elements (e.g., vertices, angles, faces, edges, congruent parts) of common three-dimensional figures (spheres, cones, cylinders, prisms and pyramids).</p>	<p><b>SE/TE:</b> 409, 410-413, 419, 429</p>

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<p><b>MA-7-G-S-SR5</b>                      Students will represent three-dimensional geometric objects with special attention to developing spatial sense (e.g., top view, side view, three-dimensional objects drawn on isometric dot paper).</p>	SE/TE: 409, 410-413, 419, 429
<p><b>MA-7-G-S-SR6</b>                      Students will describe and provide examples of congruent and similar figures and apply congruent and similar figures to solve real-world problems.</p>	SE/TE: 251-256, 267, 346-349, 367
<b>Related Core Content for Assessment</b>	
<p><i>MA-07-3.1.1</i>                      Students will describe, provide examples of and identify (using correct notation, label and name) the basic geometric elements (e.g., points, segments, rays, lines, angles and planes), in real-world and mathematical problems.</p>	SE/TE: 324-327, 328, 330-334, 336
<p><b>MA-07-3.1.2</b>                      Students will describe and provide examples of the elements (e.g., sides, vertices, angles, congruent parts) of two-dimensional figures (circles, triangles [acute, right, obtuse, scalene, isosceles, equilateral], quadrilaterals [square, rectangle, rhombus, parallelogram, trapezoid], regular polygons), and will apply these elements and figures to solve real-world and mathematical problems.  <b>DOK 2</b></p>	SE/TE: 335, 336-339, 340-344, 350-353, 366-367
<p><i>MA-07-3.1.3</i>                      Students will describe, provide examples of, and identify elements (e.g., vertices, angles, faces, edges, congruent parts) of common three-dimensional figures (spheres, cones, cylinders, prisms, and pyramids).</p>	SE/TE: 409, 410-413, 419, 429
<p><b>MA-07-3.1.4</b>                      Students will describe and provide examples of congruent and similar figures, and will apply congruent and similar figures to solve real-world and mathematical problems.  <b>DOK 2</b></p>	SE/TE: 251-256, 267, 346-349, 367

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<b>Program of Studies: Understandings</b>	
<b>MA-7-G-U-2</b> Students will understand that representational systems, including coordinate geometry, are means for specifying locations and describing spatial relationships and are organizers for making sense of the world around them.	SE/TE: 489, 490, 495, 496-497, 499-510
<b>Program of Studies: Skills and Concepts</b>	
<b>MA-7-G-S-CG1</b> Students will identify and graph ordered pairs on a coordinate system, identifying the origin, axes and ordered pairs.	SE/TE: 486-490, 491-494, 495, 496-497, 498-501, 504-507, 524
<b>MA-7-G-S-CG2</b> Students will apply graphing in the coordinate system to solve real-world and/or mathematical problems.	SE/TE: 487-489, 490, 491-494, 496-497, 498-501, 506-507, 513
<b>Related Core Content for Assessment</b>	
<b>MA-07-3.3.1</b> <b>Students will identify and graph ordered pairs on a coordinate system, correctly identifying the origin, axes and ordered pairs; and will apply graphing in the coordinate system to solve real-world and mathematical problems.</b> <b>DOK 2</b>	SE/TE: 486-490, 491-494, 495, 496-497, 498-501, 504-507, 524
<b>Program of Studies: Understandings</b>	
<b>MA-7-G-U-3</b> Students will understand that transformations and symmetry are used to analyze real-world situations (e.g., art, nature, construction and scientific exploration).	SE/TE: 510, 512-513, 514, 516-517, 518, 519-522
<b>MA-7-G-U-4</b> Students will understand that shape and area are conserved during mathematical transformations (flips, slides and turns). Scale conserves shape, but changes size.	SE/TE: 256, 509, 510
<b>Program of Studies: Skills and Concepts</b>	
<b>MA-7-G-S-TS1</b> Students will move shapes in a plane and/or in a coordinate plane (translate [slide], rotate [turn] about the origin or a vertex, reflect [flip] over a horizontal or vertical line)	SE/TE: 509-513, 514-517, 525
<b>Related Core Content for Assessment</b>	
<i>MA-07-3.2.2</i> <i>Students will translate (slide) and reflect (flip) figures in a coordinate plane.</i>	SE/TE: 509-513, 514-517, 525

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<p><i>MA-07-3.2.3</i>  <i>Students will identify rotations (clockwise or counterclockwise) of figures about the origin in the plane (90°, 180°, 270°).</i></p>	<b>SE/TE:</b> 509, 519-522, 525
<b>Program of Studies: Understandings</b>	
<p><b>MA-7-G-U-5</b>            Students will understand that visualization, spatial reasoning and geometric relationships model real-world situations.</p>	<b>SE/TE:</b> 253, 356, 404, 414-418, 429, 518
<b>Program of Studies: Skills and Concepts</b>	
<p><b>MA-7-G-S-SR1</b>            Students will describe, provide examples of and identify (using correct notation, label and name) the basic geometric elements (e.g., points, segments, rays, lines, angles and planes), including both real world and/or mathematical situations.</p>	<b>SE/TE:</b> 324-327, 328, 330-334, 336
<p><b>MA-7-G-S-SR3</b>            Students will identify properties for classifying, describe, provide examples of and identify elements (e.g., sides, vertices, angles, congruent parts) of two-dimensional figures (circles, triangles [acute, right, obtuse, scalene, isosceles, equilateral], quadrilaterals [square, rectangle, rhombus, parallelogram, trapezoid], regular and irregular polygons); apply properties of these figures to solve real-world problems.</p>	<b>SE/TE:</b> 335, 336-339, 340-344, 350-353, 366-367
<p><b>MA-7-G-S-SR6</b>            Students will describe and provide examples of congruent and similar figures and apply congruent and similar figures to solve real-world problems.</p>	<b>SE/TE:</b> 251-256, 267, 346-349, 367
<p><b>MA-7-G-S-CG2</b>            Students will apply graphing in the coordinate system to solve real-world and/or mathematical problems.</p>	<b>SE/TE:</b> 487-489, 490, 491-494, 496-497, 498-501, 506-507, 513
<b>Related Core Content for Assessment</b>	
<p><i>MA-07-3.1.1</i>  <i>Students will describe, provide examples of and identify (using correct notation, label and name) the basic geometric elements (e.g., points, segments, rays, lines, angles and planes), in real-world and mathematical problems.</i></p>	<b>SE/TE:</b> 324-327, 328, 330-334, 336

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<p><b>MA-07-3.1.2</b> Students will describe and provide examples of the elements (e.g., sides, vertices, angles, congruent parts) of two-dimensional figures (circles, triangles [acute, right, obtuse, scalene, isosceles, equilateral], quadrilaterals [square, rectangle, rhombus, parallelogram, trapezoid], regular polygons), and will apply these elements and figures to solve real-world and mathematical problems. <b>DOK 2</b></p>	<p><b>SE/TE:</b> 335, 336-339, 340-344, 350-353, 366-367</p>
<p><b>MA-07-3.1.4</b> Students will describe and provide examples of congruent and similar figures, and will apply congruent and similar figures to solve real-world and mathematical problems. <b>DOK 2</b></p>	<p><b>SE/TE:</b> 251-256, 267, 346-349, 367</p>
<p><b>MA-07-3.3.1</b> Students will identify and graph ordered pairs on a coordinate system, correctly identifying the origin, axes and ordered pairs; and will apply graphing in the coordinate system to solve real-world and mathematical problems. <b>DOK 2</b></p>	<p><b>SE/TE:</b> 487-489, 490, 491-494, 496-497, 498-501, 506-507, 513</p>
<p><b>Big Idea: Data Analysis and Probability</b> Middle grades students extend the early development of data representations and examine the appropriateness of graphs and representations of data. They examine central tendencies and dispersion. They develop organized approaches to counting and use experimental and theoretical probabilities.</p> <p><b>Academic Expectations</b></p> <p><b>2.7</b> Students understand number concepts and use numbers appropriately and accurately.</p> <p><b>2.8</b> Students understand various mathematical procedures and use them appropriately and accurately.</p> <p><b>2.13</b> Students understand and appropriately use statistics and probability.</p>	
<p><b>Program of Studies: Understandings</b></p>	
<p><b>MA-7-DAP-U-1</b> Students will understand that quantitative literacy is a necessary tool to be an intelligent consumer and citizen.</p>	<p><b>SE/TE:</b> 22, 30, 35, 47, 138, 162, 192, 196, 217, 222, 243, 295, 301, 304, 306, 307, 446, 457, 469, 473, 562, 587, 610, 611</p>



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<b>Program of Studies: Skills and Concepts</b>	
<b>MA-7-DAP-S-DR1</b> Students will collect, organize, construct, analyze and interpret data and data displays in a variety of graphical methods, including circle graphs, multiple line graphs, double bar graphs and double stem-and-leaf plots.	SE/TE: 243, 354-360, 532-536, 537, 538-542, 543, 544-547, 549, 560-564, 566, 567-571
<b>Related Core Content for Assessment</b>	
<b>MA-07-4.1.1</b> <b>Students will analyze and make inferences from data displays (drawings, tables/charts, pictographs, bar graphs, circle graphs, line plots, Venn diagrams, line graphs, stem-and-leaf plots, scatter plots).</b> <i>DOK 3</i>	SE/TE: 354-360, 532-536, 537, 538-542, 543, 544-547, 549, 560-564, 566, 567-571
<b>MA-07-4.1.4</b> <b>Students will determine and construct appropriate data displays (bar graphs, line plots, Venn diagrams, tables, line graphs, stem-and-leaf plots), and will explain why the type of display is appropriate for the data.</b> <b>DOK 2</b>	SE/TE: 534, 541, 543, 547, 548, 553, 557
<b>Program of Studies: Understandings</b>	
<b>MA-7-DAP-U-2</b> Students will understand that the collection, organization, interpretation and display of data can be used to answer questions.	SE/TE: 243, 354-360, 532-536, 537, 538-542, 543, 544-547, 549, 560-564, 566, 567-571
<b>Program of Studies: Skills and Concepts</b>	
<b>MA-7-DAP-S-DR1</b> Students will collect, organize, construct, analyze and interpret data and data displays in a variety of graphical methods, including circle graphs, multiple line graphs, double bar graphs and double stem-and-leaf plots	SE/TE: 243, 354-360, 532-536, 537, 538-542, 543, 544-547, 549, 560-564, 566, 567-571
<b>MA-7-DAP-S-DR3</b> Students will compare data from various types of graphs.	SE/TE: 534-536, 539, 541, 543, 547, 548, 553, 560-564
<b>MA-7-DAP-S-DR4</b> Students will relate different representations of data (e.g., tables, graphs, diagrams, plots).	SE/TE: 243, 354-360, 532-536, 537, 538-542, 543, 544-547, 549, 560-564, 566, 567-571
<b>MA-7-DAP-S-ES1</b> Students will pose questions; collect, organize and display data.	SE/TE: 243, 354-360, 532-536, 537, 538-542, 543, 544-547, 549, 560-564, 566, 567-571

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<b>MA-07-4.1.1</b> Students will analyze and make inferences from data displays (drawings, tables/charts, pictographs, bar graphs, circle graphs, line plots, Venn diagrams, line graphs, stem-and-leaf plots, scatter plots). <b>DOK 3</b>	<b>SE/TE:</b> 243, 354-360, 532-536, 537, 538-542, 543, 544-547, 549, 560-564, 566, 567-571
<b>MA-07-4.1.4</b> Students will determine and construct appropriate data displays (bar graphs, line plots, Venn diagrams, tables, line graphs, stem-and-leaf plots), and will explain why the type of display is appropriate for the data. <b>DOK 2</b>	<b>SE/TE:</b> 534, 541, 543, 547, 548, 553, 557
<b>Program of Studies: Understandings</b>	
<b>MA-7-DAP-U-3</b> Students will understand that the choice of data display can affect the visual message communicated.	<b>SE/TE:</b> 534-536, 539, 541, 543, 547, 548, 553, 560-564
<b>Program of Studies: Skills and Concepts</b>	
<b>MA-7-DAP-S-DR2</b> Students will select an appropriate graph to represent given data and justify its use.	<b>SE/TE:</b> 534-536, 539, 541, 543, 547, 548, 553, 560-564
<b>MA-7-DAP-S-DR3</b> Students will compare data from various types of graphs.	<b>SE/TE:</b> 534-536, 539, 541, 543, 547, 548, 553, 560-564
<b>MA-7-DAP-S-DR4</b> Students will relate different representations of data (e.g., tables, graphs, diagrams, plots).	<b>SE/TE:</b> 243, 354-360, 532-536, 537, 538-542, 543, 544-547, 549, 560-564, 566, 567-571
<b>MA-7-DAP-S-DR6</b> Students will make decisions about how misleading representations affect interpretations and conclusions about data (e.g. changing the scale on a graph).	<b>SE/TE:</b> 560-564
<b>Related Core Content for Assessment</b>	
<i>MA-07-4.1.2</i> <i>Students will explain how different representations of data (e.g., tables, graphs, diagrams, plots) are related.</i>	<b>SE/TE:</b> 534, 541, 543, 547, 548, 553, 557
<i>MA-07-4.1.5</i> <i>Students will make decisions about how misleading representations affect interpretations and conclusions about data (e.g., changing the scale on a graph).</i>	<b>SE/TE:</b> 560-564

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<b>Program of Studies: Understandings</b>	
<b>MA-7-DAP-U-4</b> Students will understand that inferences and predictions from data are used to make critical and informed decisions.	SE/TE: 243, 354-360, 532-536, 537, 538-542, 543, 544-547, 549, 560-564, 566, 567-571
<b>Program of Studies: Skills and Concepts</b>	
<b>MA-7-DAP-S-DR5</b> Students will read/interpret, analyze and make inferences from a box and whisker plot of data and make predictions and draw conclusions from the data.	SE/TE: 58
<b>MA-7-DAP-S-CD1</b> Students will make predictions, draw conclusions and verify results from statistical data and probability experiments.	SE/TE: 243, 354-360, 532-536, 537, 538-542, 543, 544-547, 549, 560-564, 566, 567-571, 585, 586-589, 591-595, 596, 597, 598-602, 606-609, 610-613, 617-618
<b>MA-7-DAP-S-ES2</b> Students will explore how sample size affects the reliability of the outcome.	SE/TE: 530D, 550-553, 628
<b>Related Core Content for Assessment</b>	
<i>MA-07-4.1.3</i> <i>Students will read/interpret, analyze and make inferences from box and whisker plots of data and make predictions and draw conclusions from the data.</i>	SE/TE: 58
<b>Program of Studies: Understandings</b>	
<b>MA-7-DAP-U-5</b> Students will understand that for a given set of data or a graph, statistical measures (mean, median, mode, range) can be used to describe the distribution of the data.	SE/TE: 53-57, 61, 218, 473, 545, 546, 558, 561, 563, 571
<b>Program of Studies: Skills and Concepts</b>	
<b>MA-7-DAP-S-CD2</b> Students will determine, apply and compare measures of mean, median, mode and/or range, as appropriate to the problem situation.	SE/TE: 53-57, 61, 218, 473, 545, 546, 558, 561, 563, 571
<b>MA-7-DAP-S-CD3</b> Students will identify clusters, gaps and outliers within the data.	SE/TE: 53, 61
<b>Related Core Content for Assessment</b>	
<b>MA-07-4.2.1</b> <b>Students will determine the mean, median, mode and range of a set of data, and will identify clusters, gaps and outliers within the data.</b> <b>DOK 2</b>	SE/TE: 53-57, 61, 218, 473, 545, 546, 558, 561, 563, 571

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<b>Program of Studies: Understandings</b>	
<b>MA-7-DAP-U-6</b> Students will understand that probability can be used to make decisions or predictions or to draw conclusions.	SE/TE: 584, 585, 586-589, 596, 597, 601-602, 604-605, 609, 612-613, 617-618
<b>Program of Studies: Skills and Concepts</b>	
<b>MA-7-DAP-S-P1</b> Students will make predictions, draw conclusions and verify results from statistical data and probability experiments.	SE/TE: 243, 354-360, 532-536, 537, 538-542, 543, 544-547, 549, 560-564, 566, 567-571, 585, 586-589, 591-595, 596, 597, 598-602, 606-609, 610-613, 617-618
<b>MA-7-DAP-S-P2</b> Students will determine appropriate techniques to use when investigating possible outcomes of probability problems (using counting techniques, tree diagrams, area models and exhaustive organized lists, charts and tables).	SE/TE: 585, 586-589, 591-595, 596, 597, 598-602, 606-609, 610-613, 617-618
<b>MA-7-DAP-S-P3</b> Students will investigate and explain the role of probability in decision making.	SE/TE: 580-583
<b>MA-7-DAP-S-P4</b> Students will design and conduct probability experiments.	SE/TE: 585, 594-595, 596
<b>MA-7-DAP-S-P5</b> Students will determine theoretical (mathematical) probabilities (expressed as a ratio, decimal or percent), compare to experimental results and explain reasons why there might be differences.	SE/TE: 586-589, 616
<b>MA-7-DAP-S-P6</b> Students will explore concepts of randomness and independent events.	SE/TE: 590, 598-602
<b>MA-7-DAP-S-P7</b> Students will apply counting techniques to determine the size of a sample space.	SE/TE: 591-595, 597, 617
<b>Related Core Content for Assessment</b>	
<b>MA-07-4.4.1</b> <b>Students will apply counting techniques to determine the size of a sample space for a real-world or mathematical situation.</b> <b>DOK 2</b>	SE/TE: 591-595, 597, 617

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<b>MA-07-4.4.2</b> <b>Students will:</b> <ul style="list-style-type: none"> <li>• determine theoretical probabilities of simple events;</li> <li>• determine probabilities based on the results of an experiment and</li> <li>• make inferences from probability data.</li> </ul> <b>DOK 3</b>	SE/TE: 580-583, 584, 585, 596-589, 616
<i>MA-07-4.4.3</i> <i>Students will tabulate experimental results from simulations and explain how theoretical and experimental probabilities are related.</i>	SE/TE: 596-589, 616
<b>Big Idea: Algebraic Thinking</b> Middle grade students extend pattern work to include arithmetic sequences. They use linear functions and linear equations. They plot rational number pairs in the Cartesian plane. They simplify algebraic and numeric expressions. They explore the effects of change on related variables. They use and solve two-step single variable equations and inequalities.	
<b>Academic Expectations</b> <b>2.8</b> Students understand various mathematical procedures and use them appropriately and accurately. <b>2.11</b> Students understand mathematical change concepts and use them appropriately and accurately. <b>2.12</b> Students understand mathematical structure concepts including the properties and logic of various mathematical systems.	
<b>Program of Studies: Understandings</b>	
<b>MA-7-AT-U-1</b> Students will understand that patterns, relations and functions are tools that help explain or predict real-world phenomena.	SE/TE: 461-464, 466-467, 468-471, 472-475, 476
<b>Program of Studies: Skills and Concepts</b>	
<b>MA-7-AT-S-PRF1</b> Students will recognize, create and extend patterns and generalize the pattern by determining the rule for any term.	SE/TE: 21, 22, 43, 44, 71, 90, 168, 214, 363, 404, 419, 437-439, 441, 442-445, 446-449, 451, 452-455, 456-459, 466-467, 478-479
<b>MA-7-AT-S-PRF2</b> Students will represent, analyze and generalize functional relationships (input/output) through tables, graphs and verbal rules.	SE/TE: 452-455, 456-459
<b>MA-7-AT-S-PRF3</b> Students will organize input-output coordinate pairs into tables and plot points in all four quadrants of a coordinate (Cartesian) system/grid; interpret resulting patterns/trends.	SE/TE: 456-459, 460, 468-471, 476

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<b>Related Core Content for Assessment</b>	
<b>MA-07-5.1.1</b> Students will extend, describe rules for patterns and find a missing term in a pattern from real-world and mathematical problems. <b>DOK 3</b>	<b>SE/TE:</b> 21, 22, 43, 44, 71, 90, 168, 214, 363, 404, 419, 437-439, 441, 442-445, 446-449, 451, 452-455, 456-459, 461-464, 466-467, 478-479
<i>MA-07-5.1.3</i> <i>Students will explain how tables, graphs, patterns, verbal rules and equations relate to each other.</i>	<b>SE/TE:</b> 456-459, 461-463, 468-471, 472-475, 476, 479
<b>Program of Studies: Understandings</b>	
<b>MA-7-AT-U-2</b> Students will understand that numerical patterns can be written as rules that generate the pattern.	<b>SE/TE:</b> 452-455
<b>Program of Studies: Skills and Concepts</b>	
<b>MA-7-AT-S-PRF1</b> Students will recognize, create and extend patterns and generalize the pattern by determining the rule for any term.	<b>SE/TE:</b> 21, 22, 43, 44, 71, 90, 168, 214, 363, 404, 419, 437-439, 441, 442-445, 446-449, 451, 452-455, 456-459, 466-467, 478-479
<b>MA-7-AT-S-PRF3</b> Students will organize input-output coordinate pairs into tables and plot points in all four quadrants of a coordinate (Cartesian) system/grid; interpret resulting patterns/trends.	<b>SE/TE:</b> 456-459, 460, 468-471, 476
<b>Related Core Content for Assessment</b>	
<b>MA-07-5.1.1</b> Students will extend, describe rules for patterns and find a missing term in a pattern from real-world and mathematical problems. <b>DOK 3</b>	<b>SE/TE:</b> 21, 22, 43, 44, 71, 90, 168, 214, 363, 404, 419, 437-439, 441, 442-445, 446-449, 451, 452-455, 456-459, 461-464, 466-467, 478-479
<b>Program of Studies: Understandings</b>	
<b>MA-7-AT-U-3</b> Students will understand that algebra represents mathematical situations and structures for analysis and problem solving.	<b>SE/TE:</b> 49, 305, 310-311, 331, 337, 355, 381, 385, 388-389, 394-395, 405-406, 416, 418, 419, 422-423, 472-473, 491
<b>Program of Studies: Skills and Concepts</b>	
<b>MA-7-AT-S-PRF3</b> Students will organize input-output coordinate pairs into tables and plot points in all four quadrants of a coordinate (Cartesian) system/grid; interpret resulting patterns/trends.	<b>SE/TE:</b> 567-570, 573

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<b>MA-7-AT-S-VEO1</b> Students will simplify numeric and algebraic expressions.	<b>SE/TE:</b> 48-51, 53, 61, 72, 166, 169, 172
<b>MA-7-AT-S-VEO2</b> Students will substitute values for variables to evaluate algebraic expressions.	<b>SE/TE:</b> 168, 169-172, 174, 194-195, 220, 222, 434, 484
<b>MA-7-AT-S-VEO3</b> Students will describe, define and provide examples of algebraic expressions based on real-world and/or mathematical situations.	<b>SE/TE:</b> 168, 169-172, 174, 194-195, 220, 222, 434, 484
<b>MA-7-AT-S-EI1</b> Students will use multiple representations to model and solve single-variable equations and inequalities.	<b>SE/TE:</b> 176, 178, 179, 180-184, 185, 186, 188, 192-193, 199, 205-207, 210-213, 214-217, 220-221
<b>MA-7-AT-S-EI2</b> Students will solve problems involving formulas.	<b>SE/TE:</b> 305, 306, 375, 380-383, 385-387, 388-392, 394-397, 422-425, 428, 429, 468-471, 476, 479
<b>MA-7-AT-S-EI3</b> Students will model and solve real-world problems with one- or two-step equations or inequalities (e.g., $2x + 1 = 9$ , $3x + 3 < 9$ ).	<b>SE/TE:</b> 174-177, 178, 179, 180-184, 186-190, 192-193, 194, 198, 199, 200-204, 205-208, 210-213, 214-218, 220-221
<b>Related Core Content for Assessment</b>	
<b>MA-07-5.1.2</b> <b>Students will represent, analyze, and generalize first degree relationships using tables, graphs and words, and will apply the relationships to solve real-world and mathematical problems.</b> <b>DOK 2</b>	<b>SE/TE:</b> 456-459, 461-463, 468-471, 472-475, 476, 479
<b>MA-07-5.2.1</b> <b>Students will substitute values for variables (up to three different variables) and evaluate algebraic expressions.</b> <b>DOK 2</b>	<b>SE/TE:</b> 168, 169-172, 174, 194-195, 220, 222, 434, 484
<i>MA-07-5.2.2</i> <i>Students will describe, define and provide examples of variables and expressions with a missing value based on real-world and mathematical problems.</i>	<b>SE/TE:</b> 168, 169-172, 174, 194-195, 220, 222, 434, 484

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<b>Related Core Content for Assessment</b>	
<b>MA-07-5.3.1</b> Students will model and solve real-world and mathematical problems with one- or two-step single variable, first-degree equations or inequalities (e.g., $2x + 1 = 9$ , $3x + 3 < 9$ ). (Statements and solutions use only non-negative numbers.) <b>DOK 2</b>	<b>SE/TE:</b> 174-177, 178, 179, 180-184, 186-190, 192-193, 194, 198, 199, 200-204, 205-208, 210-213, 214-218, 220-221
<b>Program of Studies: Understandings</b>	
<b>MA-7-AT-U-4</b> Students will understand that real-world situations can be represented using mathematical models to analyze quantitative relationships.	<b>SE/TE:</b> Representative pages: 61, 74, 222, 241, 268, 305, 449, 461, 574, 588
<b>Program of Studies: Skills and Concepts</b>	
<b>MA-7-AT-S-PRF3</b> Students will organize input-output coordinate pairs into tables and plot points in all four quadrants of a coordinate (Cartesian) system/grid; interpret resulting patterns/trends.	<b>SE/TE:</b> 567-570, 573
<b>MA-7-AT-S-VEO3</b> Students will describe, define and provide examples of algebraic expressions based on real-world and/or mathematical situations.	<b>SE/TE:</b> 168, 169-172, 174, 194-195, 220, 222, 434, 484
<b>MA-7-AT-S-EI3</b> Students will model and solve real-world problems with one- or two-step equations or inequalities (e.g., $2x + 1 = 9$ , $3x + 3 < 9$ ).	<b>SE/TE:</b> 174-177, 178, 179, 180-184, 186-190, 192-193, 194-198, 199, 200-204, 205-208, 210-213, 214-218, 220-221
<b>MA-07-5.3.1</b> Students will model and solve real-world and mathematical problems with one- or two-step single variable, first-degree equations or inequalities (e.g., $2x + 1 = 9$ , $3x + 3 < 9$ ). (Statements and solutions use only non-negative numbers.) <b>DOK 2</b>	<b>SE/TE:</b> 174-177, 178, 179, 180-184, 186-190, 192-193, 194-198, 199, 200-204, 205-208, 210-213, 214-218, 220-221
<b>Program of Studies: Understandings</b>	
<b>MA-7-AT-U-5</b> Students will understand that functions are used to analyze change in various contexts and model real-world phenomena.	<b>SE/TE:</b> 452-455, 456-459



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<b>Program of Studies: Skills and Concepts</b>	
<b>MA-7-AT-S-PRF3</b> Students will organize input-output coordinate pairs into tables and plot points in all four quadrants of a coordinate (Cartesian) system/grid; interpret resulting patterns/trends.	<b>SE/TE:</b> 456-459, 460, 468-471, 476
<b>MA-7-AT-S-PRF5</b> Students will explain how the change in the input affects the change in the output (e.g., in tables or graphs).	<b>SE/TE:</b> 456-459, 461-463, 468-471, 472-475, 476, 479
<b>MA-7-AT-S-EI2</b> Students will solve problems involving formulas.	<b>SE/TE:</b> 305, 306, 375, 380-383, 385-387, 388-392, 394-397, 422-425, 428, 429, 468-471, 476, 479
<b>Related Core Content for Assessment</b>	
<b>MA-07-5.1.5</b> <b>Students will explain how the change in one quantity affects the change in another quantity (e.g., in tables or graphs).</b> <b>DOK 2</b>	<b>SE/TE:</b> 456-459, 461-463, 468-471, 472-475, 476, 479
<b>Program of Studies: Understandings</b>	
<b>MA-7-AT-U-6</b> Students will understand that functions can be written in words, in a symbolic sentence or in a table.	<b>SE/TE:</b> 452-455, 456-459
<b>Program of Studies: Skills and Concepts</b>	
<b>MA-7-AT-S-PRF2</b> Students will represent, analyze and generalize functional relationships (input/output) through tables, graphs and verbal rules.	<b>SE/TE:</b> 452-455, 456-459, 460
<b>MA-7-AT-S-PRF3</b> Students will organize input-output coordinate pairs into tables and plot points in all four quadrants of a coordinate (Cartesian) system/grid; interpret resulting patterns/trends.	<b>SE/TE:</b> 452-455, 456-459, 479, 491-494, 495,
<b>MA-7-AT-S-PRF4</b> Students will relate tables, graphs, verbal rules and equations.	<b>SE/TE:</b> 456-459, 461-463, 468-471, 472-475, 476, 479, 491-494, 495, 496-497
<b>MA-7-AT-S-EI2</b> Students will solve problems involving formulas.	<b>SE/TE:</b> 305, 306, 375, 380-383, 385-387, 388-392, 394-397, 422-425, 428, 429, 468-471, 476, 479
<b>Related Core Content for Assessment</b>	
<i>MA-07-5.1.3</i> <i>Students will explain how tables, graphs, patterns, verbal rules and equations relate to each other.</i>	<b>SE/TE:</b> 456-459, 461-463, 468-471, 472-475, 476, 479