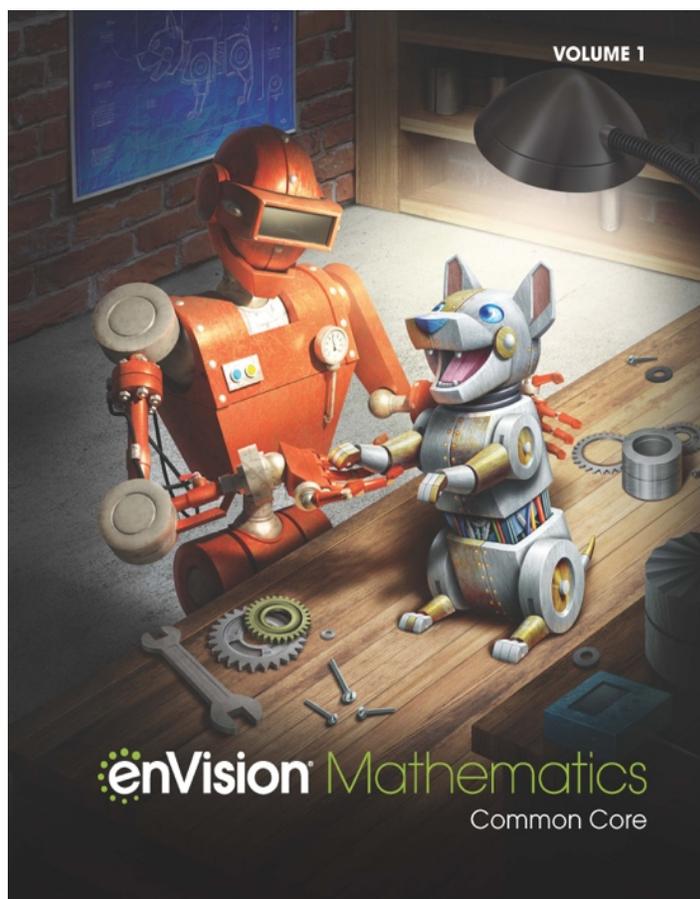


A Correlation of

**enVision** Mathematics

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to the

**Arkansas  
Mathematics Standards 2016  
Grade 7**

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**Introduction**

The new enVision® Mathematics ©2021 is the latest offering of the nationally recognized Grades K-12 series, created for print, digital, and blended instruction. Problem-Based Learning connects with Visual Learning to deep conceptual understanding. Interactive multimedia experiences engage learners in student choice and solving rich problems. Extensive customization and differentiation options empower every teacher and student.

**UNDERSTANDING**

A simple lesson design provides a clear, intentional pathway. Starting on a firm foundation of conceptual understanding, students can connect and apply math ideas in amazing ways. High-interest math projects invite all students to be active participants.

A simple lesson design provides a clear, intentional pathway.

STEP 1 Problem-Based Learning

STEP 2 Visual Learning

STEP 3 Assess and Differentiate

**ASSESSMENT**

The enVision Assessment Suite offers options to move students toward mastery of state standards while driving instructional differentiation.

**DIAGNOSTIC Assessment**

Reading Test, Diagnostic Test (Math Diagnosis and Intervention System), Review What You Know

**FORMATIVE Assessment**

SCOUT Observational Assessment used during Solve & Share, Do You Understand? And Convince Me! Guide Practice, Quick Check

**SUMMATIVE Assessment**

Topic Assessments, Topic Performance Assessments, Examview Test Generator, Fluency Assessments, Cumulative/Benchmarks Assessments, Progress Monitoring Assessments

**INSTRUCTIONAL SUPPORT**

Gain a new perspective on your teaching with embedded strategies, methods, and a wide range of Professional Development opportunities in print and digital formats.

**Ideas, Inspiration, and Teaching Methods**

Math background for every Topic and Lesson serves as an easy-to-access math methods course.

Make every lesson perfect for you. Access all digital content, assessments, and management tools at [PearsonRealize.com](https://www.pearsonrealize.com).

Kids See the Math. Teachers See Results.

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Arkansas Mathematics Standards 2016 Grade 7	enVision Mathematics, ©2021 Grade 7
<b>Ratios and Proportional</b>	
<b>Analyze proportional relationships and use them to solve real-world and mathematical problems</b>	
AR.Math.Content.7.RP.A.1 Compute unit rates associated with ratios of fractions, including ratios of lengths, areas, and other quantities measured in like or different units For example: If a person walks $\frac{1}{2}$ mile in each $\frac{1}{4}$ hour, compute the unit rate as the complex fraction $\frac{1/2}{1/4}$ miles per hour, equivalently 2 miles per hour.	<b>SE:</b> 89-94, 95-100, 131-134  <b>TE:</b> 89A-94B, 95A-100B, 131-134
AR.Math.Content.7.RP.A.2 Recognize and represent proportional relationships between quantities: <ul style="list-style-type: none"> <li>• Decide whether two quantities are in a proportional relationship (e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin)</li> <li>• Identify unit rate (also known as the constant of proportionality) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships</li> <li>• Represent proportional relationships by equations (e.g., if total cost <math>t</math> is proportional to the number <math>n</math> of items purchased at a constant price <math>p</math>, the relationship between the total cost and the number of items can be expressed as <math>t = pn</math>)</li> <li>• Explain what a point <math>(x, y)</math> on the graph of a proportional relationship means in terms of the situation, with special attention to the points <math>(0, 0)</math> and <math>(1, r)</math> where <math>r</math> is the unit rate. Note: Unit rate connects to slope concept in 8th grade.</li> </ul>	<b>SE:</b> 101-106, 107-112, 119-124, 131-134, 143-148, 149-154, 155-160, 185-188, 331-338, 357-360, 375-380, 417-422  <b>TE:</b> 101A-106B, 107A-112B, 119A-124B, 131-134, 143A-143B, 149A-149B, 155A-160B, 185-188, 331A-338B, 375A-380B, 417-422
AR.Math.Content.7.RP.A.3 Use proportional relationships to solve multi-step ratio and percent problems. Note: Examples include but are not limited to simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease.	<b>SE:</b> 89-94 95-100, 125-130, 131-134, 143-148, 149-154, 155-160, 163-168, 173-178, 179-184, 185-188  <b>TE:</b> 89A-94B, 95A-100B, 125A-130B, 131-134, 143A-143B, 149A-149B, 155A-160B, 163A-168B, 173A-178B, 179A-184B, 185-188

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To the Arkansas Mathematics Standards 2016**

Arkansas Mathematics Standards 2016 Grade 7	enVision Mathematics, ©2021 Grade 7
<b>The Number System</b>	
<b>Apply and extend previous understandings of operations with fractions</b>	
<p>AR.Math.Content.7.NS.A.1 Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers</p> <p>Represent addition and subtraction on a horizontal or vertical number line diagram:</p> <ul style="list-style-type: none"> <li>• Describe situations in which opposite quantities combine to make 0 and show that a number and its opposite have a sum of 0 (additive inverses) (e.g., A hydrogen atom has 0 charge because its two constituents are oppositely charged.)</li> <li>• Understand <math>p + q</math> as a number where <math>p</math> is the starting point and <math>q</math> represents a distance from <math>p</math> in the positive or negative direction depending on whether <math>q</math> is positive or negative</li> <li>• Interpret sums of rational numbers by describing real-world contexts (e.g., <math>3 + 2</math> means beginning at 3, move 2 units to the right and end at the sum of 5; <math>3 + (-2)</math> means beginning at 3, move 2 units to the left and end at the sum of 1; <math>70 + (-30) = 40</math> could mean after earning \$70, \$30 was spent on a new video game, leaving a balance of \$40)</li> <li>• Understand subtraction of rational numbers as adding the additive inverse, <math>p - q = p + (-q)</math></li> <li>• Show that the distance between two rational numbers on the number line is the absolute value of their difference and apply this principle in real-world contexts (e.g., the distance between -5 and 6 is 11. -5 and 6 are 11 units apart on the number line)</li> </ul>	<p><b>SE:</b> 9-14, 21-26, 27-32, 33-38, 75-80</p> <p><b>TE:</b> 9A-14B, 21A-26B, 27A-32B, 33A-38B, 75-80</p>
<p>AR.Math.Content.7.NS.A.2 Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers:</p> <ul style="list-style-type: none"> <li>• Understand that multiplication is extended from fractions to all rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, and the rules for multiplying signed numbers</li> <li>• Interpret products of rational numbers by describing real-world contexts</li> <li>• Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number (e.g., if <math>p</math> and <math>q</math> are integers, then <math>-(p/q) = (-p)/q = p/(-q)</math>)</li> <li>• Interpret quotients of rational numbers by describing real-world contexts</li> <li>• Fluently multiply and divide rational numbers by applying properties of operations as strategies</li> <li>• Convert a fraction to a decimal using long division</li> <li>• Know that the decimal form of a fraction terminates in 0s or eventually repeats</li> </ul>	<p><b>SE:</b> 15-20, 41-46, 47-52, 53-58, 59-64, 75-80</p> <p><b>TE:</b> 15A-20B, 41A-46B, 47A-52B, 53A-58B, 59A-64B, 75-80</p>

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<b>Arkansas Mathematics Standards 2016 Grade 7</b>	<b>enVision Mathematics, ©2021 Grade 7</b>
AR.Math.Content.7.NS.A.3 Solve real-world and mathematical problems involving the four operations with rational numbers, including but not limited to complex fractions	<b>SE:</b> 65-70, 75-80, 481-486, 487-492, 493-498  <b>TE:</b> 65A-70B, 75-80, 481A-486B, 487A-492B, 493-498
<b>Expressions and Equations</b>	
<b>Use properties of operations to generate equivalent expressions</b>	
AR.Math.Content.7.EE.A.1 Apply properties of operations as strategies to add, subtract, expand, and factor linear expressions with rational coefficients	<b>SE:</b> 203-208, 209-214, 215-220, 221-226, 233-238, 239-244, 251-254  <b>TE:</b> 203A-208B, 209A-214B, 215A-220B, 221A-226B, 233A-238B, 239A-244B, 251-254
AR.Math.Content.7.EE.A.2 Understand how the quantities in a problem are related by rewriting an expression in different forms. For example: $a + 0.05a = 1.05a$ means that 'increase by 5%' is the same as 'multiply by 1.05' or the perimeter of a square with side length $s$ can be written as $s+s+s+s$ or $4s$ .	<b>SE:</b> 215-220, 221-226, 233-238, 239-244, 245-250, 251-254  <b>TE:</b> 215A-220B, 221A-226B, 233A-238B, 239A-244B, 245A-250B, 251-254
<b>Solve real-life and mathematical problems using numerical and algebraic expressions and equations</b>	
AR.Math.Content.7.EE.B.3 Solve multi-step, real-life, and mathematical problems posed with positive and negative rational numbers in any form using tools strategically: <ul style="list-style-type: none"> <li>• Apply properties of operations to calculate with numbers in any form (e.g., <math>-(1/4)(n-4)</math>)</li> <li>• Convert between forms as appropriate (e.g., if a woman making \$25 an hour gets a 10% raise, she will make an additional 1/10 of her salary an hour, or \$2.50, for a new salary of \$27.50)</li> <li>• Assess the reasonableness of answers using mental computation and estimation strategies (e.g., if you want to place a towel bar <math>9\frac{3}{4}</math> inches long in the center of a door that is <math>27\frac{1}{2}</math> inches wide, you will need to place the bar about 9 inches from each edge; this estimate can be used as a check on the exact computation)</li> </ul>	<b>SE:</b> 65-70, 75-80, 197-202, 251-254, 269-274, 275-280, 311-314, 331-338, 357-360, 369-374, 387-392, 417-422, 465-470, 481-486, 487-492, 493-498  <b>TE:</b> 65A-70B, 75-80, 197A-202B, 251-254, 269A-274B, 275A-280B, 311-314, 331A-338B, 357-360, 369A-374B, 387A-392B, 417-422, 465A-470B, 481A-486B, 487A-492B, 493-498

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Arkansas Mathematics Standards 2016 Grade 7	enVision Mathematics, ©2021 Grade 7
<p>AR.Math.Content.7.EE.B.4</p> <ul style="list-style-type: none"> <li>• Use variables to represent quantities in a real-world or mathematical problem</li> <li>• Construct simple equations and inequalities to solve problems by reasoning about the quantities</li> <li>• Solve word problems leading to equations of these forms <math>px + q = r</math> and <math>p(x + q) = r</math>, where <math>p</math>, <math>q</math>, and <math>r</math> are specific rational numbers. Solve equations of these forms fluently</li> <li>• Write an algebraic solution identifying the sequence of the operations used to mirror the arithmetic solution (e.g., The perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width? Subtract <math>2 \cdot 6</math> from 54 and divide by 2; <math>(2 \cdot 6) + 2w = 54</math>)</li> <li>• Solve word problems leading to inequalities of the form <math>px + q &gt; r</math> or <math>px + q &lt; r</math>, where <math>p</math>, <math>q</math>, and <math>r</math> are specific rational numbers</li> <li>• Graph the solution set of the inequality and interpret it in the context of the problem (e.g., As a salesperson, you are paid \$50 per week plus \$3 per sale. This week you want your pay to be at least \$100. Write an inequality for the number of sales you need to make, and describe the solutions.)</li> </ul>	<p><b>SE:</b> 197-202, 251-254, 263-268, 269-274, 275-280, 283-288, 289-294, 299-304, 305-310, 311-314, 457-462, 465-470, 481-486, 487-492, 493-498</p> <p><b>TE:</b> 197A-202B, 251-254, 263A-263B, 269A-274B, 275A-280B, 283A-288B, 289A-294B, 299A-304B, 305A-310B, 311-314, 457A-462B, 465A-470B, 481A-486B, 487A-492B, 493-498</p>
<b>Geometry</b>	
<b>Draw construct, and describe geometrical figures and describe the relationships between them</b>	
<p>AR.Math.Content.7.G.A.1 Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale. Note: This concept ties into ratio and proportion.</p>	<p><b>SE:</b> 431-436, 493-498</p> <p><b>TE:</b> 431A-436B, 493-498</p>
<p>AR.Math.Content.7.G.A.2 Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions:</p> <ul style="list-style-type: none"> <li>• Given three measures of angles or sides of a triangle, notice when the conditions determine a unique triangle, more than one triangle, or no triangle</li> <li>• Differentiate between regular and irregular polygons</li> </ul>	<p><b>SE:</b> 437-442, 443-450, 493-498</p> <p><b>TE:</b> 437A-424B, 443A-450B, 493-498</p>
<p>AR.Math.Content.7.G.A.3 Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids</p>	<p><b>SE:</b> 475-480, 493-498</p> <p><b>TE:</b> 475A-480B, 493-498</p>

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<b>Arkansas Mathematics Standards 2016 Grade 7</b>	<b>enVision Mathematics, ©2021 Grade 7</b>
<b>Solve real-life and mathematical problems involving angle measure, area, surface area and volume</b>	
AR.Math.Content.7.G.B.4 • Know the formulas for the area and circumference of a circle and use them to solve problems. • Give an informal derivation of the relationship between the circumference and area of a circle	<b>SE:</b> 457-462, 465-470, 493-498  <b>TE:</b> 457A-462B, 465A-470B, 493-498
AR.Math.Content.7.G.B.5 Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure	<b>SE:</b> 451-456, 493-498  <b>TE:</b> 451A-456B, 493-498
AR.Math.Content.7.G.B.6 Solve real-world and mathematical problems involving area of two-dimensional objects and volume and surface area of three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms	<b>SE:</b> 481-486, 487-492, 493-498  <b>TE:</b> 481A-486B, 487A-492B, 493-498
<b>Statistics and Probability</b>	
<b>Use random sampling to draw inferences about a population</b>	
AR.Math.Content.7.SP.A.1 Understand that: • Statistics can be used to gain information about a population by examining a sample of the population • Generalizations about a population from a sample are valid only if the sample is representative of that population • Random sampling tends to produce representative samples and support valid inferences	<b>SE:</b> 323-330, 331-338, 357-360  <b>TE:</b> 323A-330B, 331A-338B, 357-360
AR.Math.Content.7.SP.A.2 • Use data from a random sample to draw inferences about a population with a specific characteristic • Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions For example: Estimate the mean word length in a book by randomly sampling words from the book, or predict the winner of a school election based on randomly sampled survey data. Gauge how far off the estimate or prediction might be.	<b>SE:</b> 331-338, 357-360  <b>TE:</b> 331A-338B, 357-360

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<b>Draw informal comparative inferences about two populations</b>	
<p>AR.Math.Content.7.SP.B.3 Draw conclusions about the degree of visual overlap of two numerical data distributions with similar variability such as interquartile range or mean absolute deviation, expressing the difference between the centers as a multiple of a measure of variability such as mean, median, or mode For example: The mean height of players on the basketball team is 10 cm greater than the mean height of players on the soccer team, about twice the variability on either team; on a dot plot, the separation between the two distributions of heights is noticeable.</p>	<p><b>SE:</b> 341-346, 347-352, 357-360 <b>TE:</b> 341A-346B, 347A-352B, 357-360</p>
<p>AR.Math.Content.7.SP.B.4 Draw informal comparative inferences about two populations using measures of center and measures of variability for numerical data from random samples For example: Decide whether the words in a chapter of a seventh-grade science book are generally longer than the words in a chapter of a fourth-grade science book.</p>	<p><b>SE:</b> 341-346, 347-352, 357-360 <b>TE:</b> 341A-346B, 347A-352B, 357-360</p>
<b>Investigate chance processes and develop, use, and evaluate probability models</b>	
<p>AR.Math.Content.7.SP.C.5  <ul style="list-style-type: none"> <li>• Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring</li> <li>• A probability near 0 indicates an unlikely event, a probability around 1/2 indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event</li> </ul> </p>	<p><b>SE:</b> 369-374, 417-422 <b>TE:</b> 369A-374B, 417-422</p>
<p>AR.Math.Content.7.SP.C.6  <ul style="list-style-type: none"> <li>• Collect data to approximate the probability of a chance event</li> <li>• Observe its long-run relative frequency</li> <li>• Predict the approximate relative frequency given the probability</li> </ul> <p>For example: When rolling a number cube 600 times, predict that a 3 or 6 would be rolled roughly 200 times, but probably not exactly 200 times. Note: Emphasis should be given to the relationship between experimental and theoretical probability.</p> </p>	<p><b>SE:</b> 375-380, 381-386, 417-422 <b>TE:</b> 375A-380B, 381A-386B, 417-422</p>

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<p>AR.Math.Content.7.SP.C.7 Develop a probability model and use it to find probabilities of events Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy:</p> <ul style="list-style-type: none"> <li>• Develop a uniform probability model, assigning equal probability to all outcomes, and use the model to determine probabilities of events (e.g., If a student is selected at random from a class of 6 girls and 4 boys, the probability that Jane will be selected is .10 and the probability that a girl will be selected is .60.)</li> <li>• Develop a probability model, which may not be uniform, by observing frequencies in data generated from a chance process (e.g., Find the approximate probability that a spinning penny will land heads up or that a tossed paper cup will land open-end down. Do the outcomes for the spinning penny appear to be equally likely based on the observed frequencies?)</li> </ul>	<p><b>SE:</b> 381-386, 387-392, 417-422 <b>TE:</b> 381A-386B, 387A-392B, 417-422</p>
<p>AR.Math.Content.7.SP.C.8 Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation:</p> <ul style="list-style-type: none"> <li>• Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs</li> <li>• Represent sample spaces for compound events using methods such as organized lists, tables and tree diagrams</li> <li>• Identify the outcomes in the sample space which compose the event</li> </ul> <p>Generate frequencies for compound events using a simulation (e.g., What is the frequency of pulling a red card from a deck of cards and rolling a 5 on a die?)</p>	<p><b>SE:</b> 399-404, 405-410, 411-416, 417-422 <b>TE:</b> 399A-404B, 405A-410B, 411A-416B, 417-422</p>

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