

## Level 7: Focused Mathematics Intervention Lesson Correlations

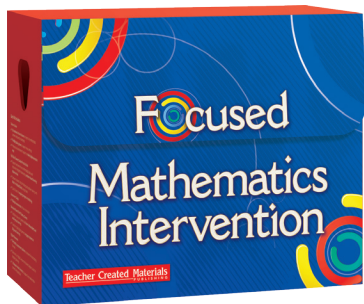
Lesson	Domain	Cluster	Standard	Math Practice
<b>Lesson 1: Unit Rates with Ratios of Fractions</b>	Ratio & Proportional Relationships	Analyze proportional relationships and use them to solve real-world and mathematical problems.	<b>7.RP.A.1</b> —Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units.	<ul style="list-style-type: none"> <li>Reason abstractly and quantitatively.</li> <li>Construct viable arguments and critique the reasoning of others.</li> <li>Attend to precision.</li> </ul>
<b>Lesson 2: Proportional Relationships</b>	Ratio & Proportional Relationships	Analyze proportional relationships and use them to solve real-world and mathematical problems.	<b>7.RP.A.2.a</b> —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.	<ul style="list-style-type: none"> <li>Reason abstractly and quantitatively.</li> <li>Construct viable arguments and critique the reasoning of others.</li> <li>Attend to precision.</li> <li>Look for and make use of structure.</li> </ul>
<b>Lesson 3: Identifying the Constant of Proportionality</b>	Ratio & Proportional Relationships	Analyze proportional relationships and use them to solve real-world and mathematical problems.	<b>7.RP.A.2.b</b> —Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.	<ul style="list-style-type: none"> <li>Reason abstractly and quantitatively.</li> <li>Attend to precision.</li> <li>Look for and make use of structure.</li> </ul>
<b>Lesson 4: Representing Proportional Relationships with Equations</b>	Ratio & Proportional Relationships	Analyze proportional relationships and use them to solve real-world and mathematical problems.	<b>7.RP.A.2.c</b> —Represent proportional relationships by equations. For example, if total cost $t$ is proportional to the number $n$ of items purchased at a constant price $p$ , the relationship between the total cost and the number of items can be expressed as $t = pn$ .	<ul style="list-style-type: none"> <li>Reason abstractly and quantitatively.</li> <li>Attend to precision.</li> <li>Look for and make use of structure.</li> </ul>
<b>Lesson 5: Interpret Graphs of Proportional Relationships</b>	Ratio & Proportional Relationships	Analyze proportional relationships and use them to solve real-world and mathematical problems.	<b>7.RP.A.2.d</b> —Explain what a point $(x, y)$ on the graph of a proportional relationship means in terms of the situation, with special attention to the points $(0, 0)$ and $(1, r)$ where $r$ is the unit rate.	<ul style="list-style-type: none"> <li>Make sense of problems and persevere in solving them.</li> <li>Reason abstractly and quantitatively.</li> <li>Attend to precision.</li> <li>Look for and make use of structure.</li> </ul>
<b>Lesson 6: Solve Multi- Step Ratio/Percent Problems</b>	Ratio & Proportional Relationships	Analyze proportional relationships and use them to solve real-world and mathematical problems.	<b>7.RP.A.3</b> —Use proportional relationships to solve multi-step ratio and percent problems. Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error.	<ul style="list-style-type: none"> <li>Make sense of problems and persevere in solving them.</li> <li>Reason abstractly and quantitatively.</li> <li>Construct viable arguments and critique the reasoning of others.</li> <li>Attend to precision.</li> <li>Look for and make use of structure.</li> </ul>

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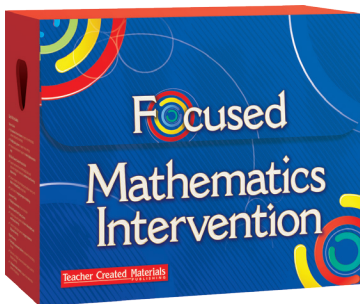
Lesson	Domain	Cluster	Standard	Math Practice
<b>Lesson 7: Addition with Rational Numbers</b>	The Number System	Apply and extend previous understandings of operations with fractions.	<p><b>7.NS.A.1.b</b>—Understand <math>p + q</math> as the number located a distance <math> q </math> from <math>p</math>, in the positive or negative direction depending on whether <math>q</math> is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts.</p> <p><b>7.NS.A.3</b>—Solve real-world and mathematical problems involving the four operations with rational numbers.</p>	<ul style="list-style-type: none"> <li>• Make sense of problems and persevere in solving them.</li> <li>• Construct viable arguments and critique the reasoning of others.</li> <li>• Model with mathematics.</li> </ul>
<b>Lesson 8: Subtracting with Rational Numbers</b>	The Number System	Apply and extend previous understandings of operations with fractions.	<p><b>7.NS.1b</b>—Understand <math>p + q</math> as the number located a distance <math> q </math> from <math>p</math>, in the positive or negative direction depending on whether <math>q</math> is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts.</p> <p><b>7.NS.A.1.c</b>—Understand subtraction of rational numbers as adding the additive inverse, <math>p - q = p + (-q)</math>. 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.</p> <p><b>7.NS.A.1.d</b>—Apply properties of operations as strategies to add and subtract rational numbers.</p> <p><b>7.NS.A.3</b>—Solve real-world and mathematical problems involving the four operations with rational numbers.</p>	<ul style="list-style-type: none"> <li>• Make sense of problems and persevere in solving them.</li> <li>• Model with mathematics.</li> <li>• Attend to precision.</li> <li>• Look for and make use of structure.</li> </ul>
<b>Lesson 9: Solving Problems with Rational Numbers</b>	The Number System	Apply and extend previous understandings of operations with fractions.	<p><b>7.NS.1b</b>—Understand <math>p + q</math> as the number located a distance <math> q </math> from <math>p</math>, in the positive or negative direction depending on whether <math>q</math> is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts.</p> <p><b>7.NS.A.1.c</b>—Understand subtraction of rational numbers as adding the additive inverse, <math>p - q = p + (-q)</math>. 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.</p> <p><b>7.NS.A.1.d</b>—Apply properties of operations as strategies to add and subtract rational numbers.</p> <p><b>7.NS.A.3</b>—Solve real-world and mathematical problems involving the four operations with rational numbers.</p>	<ul style="list-style-type: none"> <li>• Make sense of problems and persevere in solving them.</li> <li>• Construct viable arguments and critique the reasoning of others.</li> <li>• Attend to precision.</li> </ul>

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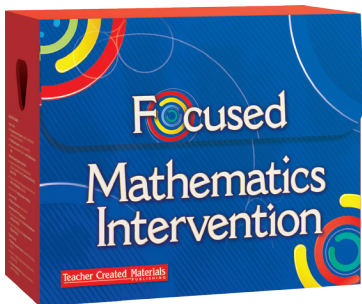
Lesson	Domain	Cluster	Standard	Math Practice
<b>Lesson 10: Multiplying with Rational Numbers</b>	The Number System	Apply and extend previous understandings of operations with fractions.	<p><b>7.NS.A.2.a</b>—Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the Distributive Property, leading to products such as <math>(-1)(-1) = 1</math> and the rules for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts.</p> <p><b>7.NS.A.2.c</b>—Apply properties of operations as strategies to multiply and divide rational numbers.</p> <p><b>7.NS.A.3</b>—Solve real-world and mathematical problems involving the four operations with rational numbers.</p>	<ul style="list-style-type: none"> <li>• Make sense of problems and persevere in solving them.</li> <li>• Model with mathematics.</li> </ul>
<b>Lesson 11: Dividing with Rational Numbers</b>	The Number System	Apply and extend previous understandings of operations with fractions.	<p><b>7.NS.2c</b>—Apply properties of operations as strategies to multiply and divide rational numbers.</p> <p><b>7.NS.A.2.b</b>—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. If <math>p</math> and <math>q</math> are integers, then <math>-(p/q) = (-p)/q = p/(-q)</math>. Interpret quotients of rational numbers by describing real-world contexts.</p> <p><b>7.NS.A.1.d</b>—Apply properties of operations as strategies to add and subtract rational numbers.</p> <p><b>7.NS.A.3</b>—Solve real-world and mathematical problems involving the four operations with rational numbers.</p>	<ul style="list-style-type: none"> <li>• Make sense of problems and persevere in solving them.</li> <li>• Model with mathematics.</li> <li>• Attend to precision.</li> <li>• Look for and make use of structure.</li> </ul>
<b>Lesson 12: Solving More Problems with Rational Numbers</b>	The Number System	Apply and extend previous understandings of operations with fractions.	<p><b>7.NS.A.2.c</b>—Apply properties of operations as strategies to multiply and divide rational numbers.</p> <p><b>7.NS.A.3</b>—Solve real-world and mathematical problems involving the four operations with rational numbers.</p>	<ul style="list-style-type: none"> <li>• Make sense of problems and persevere in solving them.</li> <li>• Construct viable arguments and critique the reasoning of others.</li> <li>• Attend to precision.</li> </ul>
<b>Lesson 13: Converting Rational Numbers to Decimals</b>	The Number System	Apply and extend previous understandings of operations with fractions.	<b>7.NS.A.2.d</b> —Convert a rational number to a decimal using long division; know that the decimal form of a rational number terminates in 0s or eventually repeats.	<ul style="list-style-type: none"> <li>• Attend to precision.</li> <li>• Look for and make use of structure.</li> <li>• Look for and express regularity in repeated reasoning.</li> </ul>
<b>Lesson 14: Adding, Subtracting, Factoring, and Expanding Linear Expressions</b>	Expressions & Equations	Use properties of operations to generate equivalent expressions.	<b>7.EE.A.1</b> —Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.	<ul style="list-style-type: none"> <li>• Reason abstractly and quantitatively.</li> <li>• Construct viable arguments and critique the reasoning of others.</li> <li>• Model with mathematics.</li> <li>• Attend to precision.</li> <li>• Look for and make use of structure.</li> </ul>

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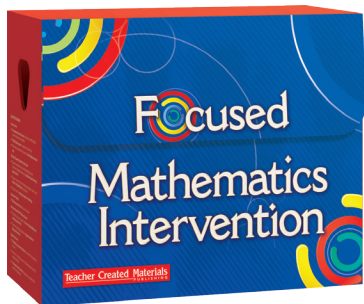
Lesson	Domain	Cluster	Standard	Math Practice
<b>Lesson 15: Linear Expressions Related to Properties of Shapes</b>	Expressions & Equations	Use properties of operations to generate equivalent expressions.	<b>7.EE.A.1</b> —Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.	<ul style="list-style-type: none"> <li>• Make sense of problems and persevere in solving them.</li> <li>• Reason abstractly and quantitatively.</li> <li>• Attend to precision.</li> <li>• Look for and make use of structure.</li> </ul>
<b>Lesson 16: Solve Word Problems with Rational Numbers</b>	Expressions & Equations	Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	<b>7.EE.B.3</b> —Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies.	<ul style="list-style-type: none"> <li>• Make sense of problems and persevere in solving them.</li> <li>• Model with mathematics.</li> <li>• Attend to precision.</li> <li>• Look for and make use of structure.</li> </ul>
<b>Lesson 17: Solve Multi-Step Problems Using Estimation</b>	Expressions & Equations	Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	<b>7.EE.B.3</b> —Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies.	<ul style="list-style-type: none"> <li>• Make sense of problems and persevere in solving them.</li> <li>• Reason abstractly and quantitatively.</li> <li>• Attend to precision.</li> <li>• Look for and make use of structure.</li> </ul>
<b>Lesson 18: Solve Equations Containing One Variable</b>	Expressions & Equations	Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	<b>7.EE.B.4.a</b> —Solve word problems leading to equations of the form $px + q = r$ and $p(x + q) = r$ , where $p$ , $q$ , and $r$ are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach.	<ul style="list-style-type: none"> <li>• Make sense of problems and persevere in solving them.</li> <li>• Reason abstractly and quantitatively.</li> <li>• Attend to precision.</li> <li>• Look for and make use of structure.</li> </ul>
<b>Lesson 19: Writing Inequalities to Represent Word Problems</b>	Expressions & Equations	Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	<b>7.EE.B.4.b</b> —Solve word problems leading to inequalities of the form $px + q > r$ or $px + q < r$ , where $p$ , $q$ , and $r$ are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem.	<ul style="list-style-type: none"> <li>• Make sense of problems and persevere in solving them.</li> <li>• Reason abstractly and quantitatively.</li> <li>• Look for and make use of structure.</li> </ul>
<b>Lesson 20: Write and Graph Inequalities</b>	Expressions & Equations	Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	<b>7.EE.B.4.b</b> —Solve word problems leading to inequalities of the form $px + q > r$ or $px + q < r$ , where $p$ , $q$ , and $r$ are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem.	<ul style="list-style-type: none"> <li>• Make sense of problems and persevere in solving them.</li> <li>• Reason abstractly and quantitatively.</li> <li>• Attend to precision.</li> <li>• Look for and make use of structure.</li> </ul>

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Lesson	Domain	Cluster	Standard	Math Practice
<b>Lesson 21: Solving Problems with Scale Drawings</b>	Geometry	Draw construct, and describe geometrical figures and describe the relationships between them.	<b>7.G.A.1</b> —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.	<ul style="list-style-type: none"> <li>• Make sense of problems and persevere in solving them.</li> <li>• Reason abstractly and quantitatively.</li> <li>• Attend to precision.</li> <li>• Look for and make use of structure.</li> </ul>
<b>Lesson 22: 2-D Planes in 3-D Figures</b>	Geometry	Draw construct, and describe geometrical figures and describe the relationships between them.	<b>7.G.A.3</b> —Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.	<ul style="list-style-type: none"> <li>• Construct viable arguments and critique the reasoning of others.</li> <li>• Model with mathematics.</li> <li>• Use appropriate tools strategically.</li> </ul>
<b>Lesson 23: Area and Circumference of Circles</b>	Geometry	Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.	<b>7.G.B.4</b> —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.	<ul style="list-style-type: none"> <li>• Reason abstractly and quantitatively.</li> <li>• Model with mathematics.</li> <li>• Attend to precision.</li> <li>• Look for and make use of structure.</li> </ul>
<b>Lesson 24: Solving Problems with Angles</b>	Geometry	Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.	<b>7.G.B.5</b> —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.	<ul style="list-style-type: none"> <li>• Make sense of problems and persevere in solving them.</li> <li>• Construct viable arguments and critique the reasoning of others.</li> <li>• Attend to precision.</li> </ul>
<b>Lesson 25: Solving for Unknown Dimensions</b>	Geometry	Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.	<b>7.G.B.6</b> —Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.	<ul style="list-style-type: none"> <li>• Make sense of problems and persevere in solving them.</li> <li>• Construct viable arguments and critique the reasoning of others.</li> <li>• Attend to precision.</li> </ul>
<b>Lesson 26: Understanding Random Samples</b>	Statistics & Probability	Use random sampling to draw inferences about a population.	<p><b>7.SP.A.1</b>—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. Understand that random sampling tends to produce representative samples and support valid inferences.</p> <p><b>7.SP.A.2</b>—Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions.</p>	<ul style="list-style-type: none"> <li>• Make sense of problems and persevere in solving them.</li> <li>• Construct viable arguments and critique the reasoning of others.</li> <li>• Look for and make use of structure.</li> </ul>

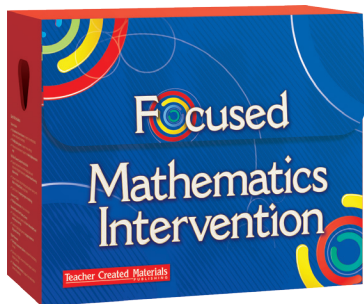
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<b>Lesson 27: Comparing Data</b>	Statistics & Probability	Draw informal comparative inferences about two populations.	<b>7.SP.B.4</b> —Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations. 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.	<ul style="list-style-type: none"> <li>Make sense of problems and persevere in solving them.</li> <li>Reason abstractly and quantitatively.</li> <li>Look for and make use of structure.</li> </ul>
<b>Lesson 28: Understanding Probability</b>	Statistics & Probability	Investigate chance processes and develop, use, and evaluate probability models.	<b>7.SP.C.5</b> —Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. 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.	<ul style="list-style-type: none"> <li>Make sense of problems and persevere in solving them.</li> <li>Construct viable arguments and critique the reasoning of others.</li> <li>Model with mathematics.</li> </ul>
<b>Lesson 29: Calculating Relative Frequency</b>	Statistics & Probability	Investigate chance processes and develop, use, and evaluate probability models.	<b>7.SP.C.6</b> —Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency, and predict the approximate relative frequency given the probability. 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.	<ul style="list-style-type: none"> <li>Construct viable arguments and critique the reasoning of others.</li> <li>Model with mathematics.</li> <li>Look for and express regularity in repeated reasoning.</li> </ul>
<b>Lesson 30: Representing Compound Events</b>	Statistics & Probability	Investigate chance processes and develop, use, and evaluate probability models.	<p><b>7.SP.C.8.a</b>—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.</p> <p><b>7.SP.C.8.b</b>—Represent sample spaces for compound events using methods such as organized lists, tables and tree diagrams. For an event described in everyday language (e.g., “rolling double sixes”), identify the outcomes in the sample space which compose the event.</p>	<ul style="list-style-type: none"> <li>Make sense of problems and persevere in solving them.</li> <li>Model with mathematics.</li> <li>Look for and make use of structure.</li> </ul>

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