A Correlation of

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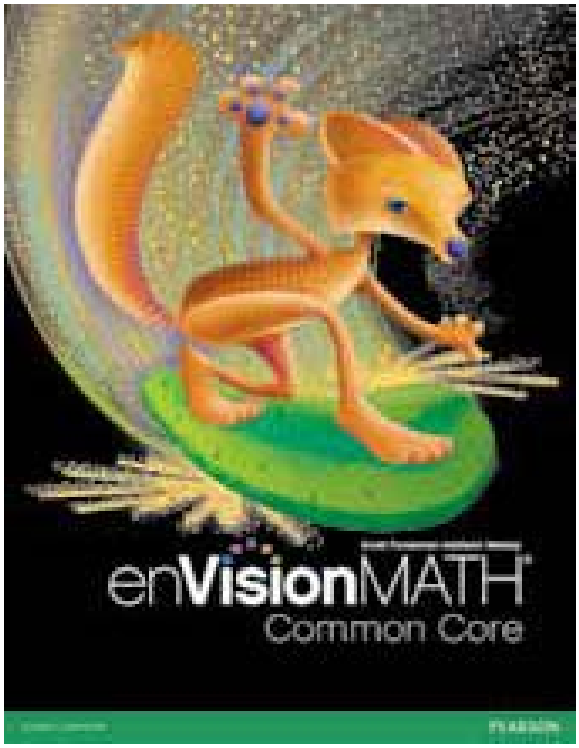

to the

Common Core State Standards for Mathematics

Grade 6

Introduction

This document demonstrates how ***enVisionMATH Common Core*** ©2012 aligns to the Common Core State Standards for Mathematics, Grade 6. Correlation page references are to the Teacher's Edition. Lessons in the Teacher's Edition include facsimile pages of the Student Edition.

enVisionMATH Common Core was written specifically to address the Common Core State Standards and is based on critical foundational research and proven classroom results. It is organized and color-coded by the Common Core Domains, so teaching is highly focused, manageable, and coherent. ***enVisionMATH Common Core*** teaches all of the standards for mathematical content within a powerful concept-development skeleton grounded on big ideas of mathematics and related essential understandings.

The straightforward 4-Part lesson structure communicates daily to teachers both the Standards for Mathematical Content and Standards for Mathematical Practice that need to be developed with students and the conceptual underpinnings that need to be understood.

enVisionMATH Common Core provides deep conceptual development and understanding through daily Problem-Based Interactive Learning as a core part of instruction. This daily Interactive Learning is then connected with Visual Learning.

The ***enVisionMATH Common Core*** Student Edition presents content in more visual ways. Page layouts are clean, open, predictable, and easy-to-use. All art is functional, promoting understanding or providing data needed for problems. Visual models are consistent and, whenever possible, the visual and physical models remain the same across lessons to make teaching and learning easier.

The ***enVisionMATH Common Core*** Teacher's Edition provides an instructional plan for each lesson that reflects the work that highly effective teachers do in the classroom. The Teacher's Edition is visually appealing, easily connecting information (e.g. questions) to its point of use in the text. Teaching is grounded on rich questions and classroom conversations.

Assessment in ***enVisionMATH Common Core*** is an integral part of instruction, not an interruption. Both skills and understanding are assessed on a daily basis. Daily formative assessment leads to data-driven differentiated instruction, as well as information for interpreting results (diagnosis) and intervention tasks.

Table of Contents

Common Core State Standards for Mathematics Mathematical Practices	enVisionMATH Common Core Grade 6
1. Make sense of problems and persevere in solving them. Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway rather than simply jumping into a solution attempt. They consider analogous problems, and try special cases and simpler forms of the original problem in order to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Older students might, depending on the context of the problem, transform algebraic expressions or change the viewing window on their graphing calculator to get the information they need. Mathematically proficient students can explain correspondences between equations, verbal descriptions, tables, and graphs or draw diagrams of important features and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and solve a problem. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, “Does this make sense?” They can understand the approaches of others to solving complex problems and identify correspondences between different approaches.	***enVisionMATH Common Core*** is built on a foundation of problem-based instruction that has sense-making at its heart. Each topic includes at least one *problem-solving lesson* in which students focus on honing their sense-making and problem-solving skills. Each lesson begins with *Problem-Based Interactive Learning,* an activity in which students interact with their peers and teachers to make sense of and decide on a workable solution for a real-world situation. Another feature of each lesson is the set of problem-solving exercises in which students persevere by applying different skills and strategies to solve problems. **SE / TE:** Topic 1: 8, 16, 20, 24-25; Topic 2: 33, 37, 38, 47, 50-53; Topic 3: 66, 67, 68, 84-87; Topic 4: 102-105, 108, 110-113; Topic 5: 122, 133, 135, 136-137; Topic 6: 152, 154-155; Topic 7: 165, 168, 176, 178-179; Topic 8: 190, 194-195; Topic 9: 205, 207, 211, 213, 214-215; Topic 10: 225, 228, 236, 241, 250-253; Topic 11: 267, 276, 288, 289, 290-291; Topic 12: 304, 311, 314-315; Topic 13: 327, 328-329, 335, 336; Topic 14: 346, 349, 351, 356, 362-363; Topic 15: 390-391; Topic 16: 410, 413, 416, 418-419; Topic 17: 428, 433, 443, 444-447; Topic 18: 457, 460, 465, 466-469; Topic 19: 481, 486, 489, 492, 500-501 **TE:** Topic 1: 22B; Topic 2: 40B; Topic 4: 106B; Topic 5: 126B; Topic 6: 154B; Topic 7: 170B; Topic 8: 188B, 194B; Topic 9: 204B, 212B; Topic 13: 320B; Topic 14: 352B; Topic 16: 418B; Topic 17: 424A; Topic 19: 494B, 500B

SE = Student Edition TE = Teacher Edition

Common Core State Standards for Mathematics Mathematical Practices	**enVisionMATH Common Core Grade 6**
2. Reason abstractly and quantitatively. Mathematically proficient students make sense of quantities and their relationships in problem situations. They bring two complementary abilities to bear on problems involving quantitative relationships: the ability to decontextualize—to abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents—and the ability to contextualize, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meaning of quantities, not just how to compute them; and knowing and flexibly using different properties of operations and objects.	***enVisionMATH Common Core*** provides scaffolded instruction to help students develop both quantitative and abstract reasoning. In the *Visual Learning Bridge,* students can see how to represent a given situation numerically or algebraically. They will have opportunities later in the lesson to reason abstractly as they endeavor to represent situations symbolically. Reasonableness exercises remind students to compare their work to the original situation. In the *Do You Understand?* part of the Guided Practice, students gain experiences with quantitative reasoning as they consider the meaning of different parts of an expression or equation. Reasoning problems throughout the exercise sets focus students' attention on the structure or meaning of an operation, for example, rather than merely the solution. **SE / TE:** Topic 1: 5, 6, 9, 12, 22, 25; Topic 2: 34, 51; Topic 3: 63, 65, 66, 75, 76, 79, 81, 83; Topic 4: 96, 100, 108; Topic 5: 122, 128, 132, 133; Topic 6: 144, 149, 152, 155; Topic 7: 167, 173, 175, 179; Topic 8: 186, 188, 190; Topic 9: 202, 203, 204, 206, 208, 209, 211, 213; Topic 10: 223, 224, 228, 232, 235, 239, 241, 243, 244, 248, 251, 252; Topic 11: 263, 264, 267, 268, 271, 274, 275, 276, 282, 289; Topic 12: 300, 303, 307, 308, 309, 312; Topic 13: 323, 325, 327, 328; Topic 14: 348, 350, 353, 360; Topic 15: 378, 388; Topic 16: 402, 405, 406, 412, 413, 418; Topic 17: 427, 432, 433, 436, 439, 440, 442; Topic 18: 462, 468; Topic 19: 477, 479, 480, 481, 482, 483, 488, 489, 490, 492, 495, 496, 499, 500 **TE:** Topic 1: 24B; Topic 2: 42B; Topic 3: 62B, 66B; Topic 4: 102B; Topic 7: 166B; Topic 8: 190B; Topic 10, 220B, 234B, 240B; Topic 12: 298E, 308B; Topic 13: 324B; Topic 14: 344B; Topic 15: 370E; Topic 16: 400B, 404B; Topic 19: 498B

Common Core State Standards for Mathematics Mathematical Practices	**enVisionMATH Common Core Grade 6**
3. Construct viable arguments and critique the reasoning of others. Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and use counterexamples. They justify their conclusions, communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. Elementary students can construct arguments using concrete referents such as objects, drawings, diagrams, and actions. Such arguments can make sense and be correct, even though they are not generalized or made formal until later grades. Later, students learn to determine domains to which an argument applies. Students at all grades can listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.	Consistent with a focus on reasoning and sense-making is a focus on critical reasoning – argumentation and critique of arguments. In Pearson's *enVisionMATH Common Core,* the *Problem-Based Interactive Learning* affords students opportunities to share with classmates their thinking about problems, their solution methods, and their reasoning about the solutions. Many exercises found throughout the program specifically call for students to use reasoning and to justify or explain their solutions. *Writing to Explain* exercises in Grades 3–6 help students develop foundational critical reasoning skills by having them construct explanations for processes. The ability to articulate a clear explanation for a process is a stepping stone to critical analysis and reasoning of both the student's own processes and those of others. **SE / TE:** Topic 1: 12, 16, 20, 22, Topic 2: 40, 41, 43, Topic 3: 64, 66, 72, 82, Topic 4: 108, Topic 5: 121, 122, 124, Topic 6: 148, Topic 7: 162, 164, 165, 179, Topic 10: 235, 244, Topic 11: 275, 280, Topic 12: 311, Topic 16: 405, 410, Topic 17: 433, 435, 445, Topic 18: 459, 463, Topic 19: 477, 478, 479, 485, 498 **TE:** Topic 1: 8B; Topic 3: 82B; Topic 7: 164B Topic 11: 270B, 284B, 288B; Topic 12: 302B, 308B, 310B; Topic 13: 324B, 328B; Topic 14: 344B, 362B; Topic 17: 424B

Common Core State Standards for Mathematics Mathematical Practices	**enVisionMATH Common Core Grade 6**
4. Model with mathematics. Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.	Students in Pearson's *enVisionMATH Common Core* are introduced to mathematical modeling in the early grades. They first use manipulatives and drawings and then equations to model addition and subtraction situations. The *Visual Learning Bridge* often presents real-world situations, and students are shown how these can be modeled mathematically. In later grades, students expand their modeling skills to include representations such as tables and graphs, as well as equations. **SE / TE:** Topic 1: 12; Topic 2: 35, 38, 47, 49; Topic 3: 62, 81, 83; Topic 4: 99, 103, 104, 111; Topic 5: 127, 137; Topic 6: 145; Topic 7: 163, 168, 179; Topic 8: 193; Topic 9: 207, 209; Topic 10: 236, 239; Topic 11: 268, 276, 280, 283; Topic 12: 301; Topic 13: 323, 327, 329; Topic 14: 346; Topic 15: 374, 381, 384, 388, 391; Topic 17: 428, 433, 444; Topic 18: 457, 459, 464; Topic 19: 479, 486, 496, 499 **TE:** Topic 3: 64B, 84B; Topic 9: 206B; Topic 10: 220E, 222B, 230B; Topic 12: 306B; Topic 13: 320B, 320E, 326B; Topic 14: 342B, 350B, 358B; Topic 15: 376B; Topic 18: 452E

Common Core State Standards for Mathematics Mathematical Practices	**enVisionMATH Common Core Grade 6**
5. Use appropriate tools strategically. Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. For example, mathematically proficient high school students analyze graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.	Students become fluent in the use of a wide assortment of tools ranging from physical objects, including manipulatives, rulers, protractors, and even pencil and paper, to digital tools, such as eTools, calculators, and computers. As students become more familiar with the tools available to them, they are able to begin making decisions about which tools are most helpful in a particular situation. **SE / TE:** Topic 1: 25; Topic 2: 44, 51; Topic 3: 79; Topic 4: 97, 105; Topic 5: 127, 128, 130, 137; Topic 6: 144, 147, 154, 155; Topic 7: 168, 179; Topic 8: 191, 193; Topic 9: 205; Topic 10: 227, 229, 233, 241; Topic 11: 265, 266-269, 273; Topic 12: 304, 313, 315; Topic 13: 322, 328, 336; Topic 14: 355, 357; Topic 15: 384, 387, 388; Topic 16: 419; Topic 18: 467, 468; Topic 19: 477, 479, 486, 492, 497 **TE:** Topic 1: 18B; Topic 2: 32B, 50B; Topic 3: 70B, 78B; Topic 4: 96B, 98B; Topic 5: 120B, 128B, 132B; Topic 7: 162B; Topic 9: 202B; Topic 10: 224B, 246B; Topic 11: 266B; Topic 12: 298B; Topic 13: 322B, 334B; Topic 14: 348B; Topic 15: 378B; Topic 17: 430B, 444B; Topic 18: 452A, 452B, 458B, 462B, 466B; Topic 19: 476B

Common Core State Standards for Mathematics Mathematical Practices	**enVisionMATH Common Core Grade 6**
6. Attend to precision. Mathematically proficient students try to communicate precisely to others. They try to use clear definitions in discussion with others and in their own reasoning. They state the meaning of the symbols they choose, including using the equal sign consistently and appropriately. They are careful about specifying units of measure, and labeling axes to clarify the correspondence with quantities in a problem. They calculate accurately and efficiently, express numerical answers with a degree of precision appropriate for the problem context. In the elementary grades, students give carefully formulated explanations to each other. By the time they reach high school they have learned to examine claims and make explicit use of definitions.	Students are expected to use mathematical terms and symbols with precision. Key terms and concepts are highlighted in each lesson. The *Problem-Based Interactive Learning* activity provides repeated opportunities for children to use precise language to explain their solution paths while solving problems. In the *Do You Understand?* feature, students revisit these key terms or concepts and provide explicit definitions or explanations. In Grades 3–6, the *Writing to Explain* and *Think About the Structure* exercises require students to use precise language to provide clear explanations of terms, concepts, or processes. Students are reminded to use appropriate units of measure in their solutions as well as in labels for diagrams, graphs, and other kinds of displays. **SE / TE:** Topic 1: 15; Topic 2: 32, 47, 50; Topic 3: 62, 65, 66; Topic 6: 151, 152, 154; Topic 7: 167, 176; Topic 8: 195; Topic 10: 223, 248, 252; Topic 11: 264, 279, 285; Topic 12: 306; Topic 14: 345, 355, 359; Topic 15: 391; Topic 16: 401, 410, 411; Topic 17: 433, 439, 440, 445; Topic 18: 456, 463; Topic 19: 492, 496, 501 **TE:** Topic 1: 2H, 2K; Topic 2: 36B; Topic 3: 76B, 80B; Topic 4: 110B; Topic 5: 124B, 134B; Topic 6: 146B, 148B; Topic 7: 172B; Topic 8: 186B, 192B; Topic 9: 200E, 208B, 210B; Topic 10: 220A, 242B, 250B; Topic 11: 260A, 260E, 262B, 274B, 278B, 282B; Topic 12: 300B, 314B; 330B; Topic 14: 342A; Topic 15: 380B, 382B; Topic 16: 398E, 408B, 412B, 414B; Topic 17: 426B; Topic 18: 452B; Topic 19: 474E, 480B, 484B

Common Core State Standards for Mathematics Mathematical Practices	**enVisionMATH Common Core Grade 6**
7. Look for and make use of structure. Mathematically proficient students look closely to discern a pattern or structure. Young students, for example, might notice that three and seven more is the same amount as seven and three more, or they may sort a collection of shapes according to how many sides the shapes have. Later, students will see 7 × 8 equals the well remembered 7 × 5 + 7 × 3, in preparation for learning about the distributive property. In the expression x2 + 9x + 14, older students can see the 14 as 2 × 7 and the 9 as 2 + 7. They recognize the significance of an existing line in a geometric figure and can use the strategy of drawing an auxiliary line for solving problems. They also can step back for an overview and shift perspective. They can see complicated things, such as some algebraic expressions, as single objects or as being composed of several objects. For example, they can see 5 – 3(x – y)2 as 5 minus a positive number times a square and use that to realize that its value cannot be more than 5 for any real numbers x and y.	Students are encouraged to look for structure as they develop solution plans. In the *Look for a Pattern* problem-solving lessons, children in the early years develop a sense of patterning with visual and physical objects. As students mature in their mathematical thinking, they look for structure in numerical operations by focusing on place value and properties of operations. This focus on looking for and recognizing structure enables students to draw from patterns as they formalize their thinking about the structure of operations. **SE / TE:** Topic 1: 12, 16, 20, 25; Topic 2: 33, 34, 35, 41, 44, 49; Topic 3: 63, 66, 77, 81, 86; Topic 4: 97, 100, 104, 108; Topic 5: 130; Topic 6: 163, 168; Topic 7: 171; Topic 8: 187, 189; Topic 9: 203; Topic 10: 232, 248, 252; Topic 11: 264, 272, 281; Topic 12: 301, 307, 315; Topic 13: 325, 331, 336; Topic 14: 346, 353, 356, 360, 363; Topic 15: 373, 374, 377, 379, 381, 384; Topic 16: 402, 406, 413, 419; Topic 17: 440; Topic 18: 463, 468; Topic 19: 483, 486 **TE:** Topic 1: 2G, 2L, 4B, 10B, 14B; Topic 2: 34B, 46B, 48B; Topic 3: 74B; Topic 5: 136B; Topic 6: 150B; Topic 7: 178B; Topic 9: 200F, 214B; Topic 10: 220F, 238B; Topic 11: 260B, 260F, 290B; Topic 12: 298F; Topic 14: 354B, 362B; Topic 15: 370F, 372B; Topic 16: 394A, 398F; Topic 17: 424F, 434B; Topic 18: 452F; Topic 19: 474B, 474F, 478B, 482B, 488B

Common Core State Standards for Mathematics Mathematical Practices	enVisionMATH Common Core Grade 6
8. Look for and express regularity in repeated reasoning. Mathematically proficient students notice if calculations are repeated, and look both for general methods and for shortcuts. Upper elementary students might notice when dividing 25 by 11 that they are repeating the same calculations over and over again, and conclude they have a repeating decimal. By paying attention to the calculation of slope as they repeatedly check whether points are on the line through (1, 2) with slope 3, middle school students might abstract the equation $(y – 2)/(x – 1) = 3$. Noticing the regularity in the way terms cancel when expanding $(x – 1)(x + 1)$, $(x – 1)(x2 + x + 1)$, and $(x – 1)(x3 + x2 + x + 1)$ might lead them to the general formula for the sum of a geometric series. As they work to solve a problem, mathematically proficient students maintain oversight of the process, while attending to the details. They continually evaluate the reasonableness of their intermediate results.	Students are prompted to look for repetition in computations to help them develop shortcuts and become more efficient problem solvers. Students are reminded to think about problems they have encountered previously that may share features or processes. They are encouraged to draw on the solution plan developed for such problems, and as their mathematical thinking matures, to look for and apply generalizations to similar situations. The *Problem-Based Interactive Learning* activities offer students opportunities to look for regularity in the way operations behave. **SE / TE:** Topic 2: 48-49; Topic 3: 65, 66, 78, 86; Topic 6: 153; Topic 7: 170, 171, 172, 178; Topic 9: 214-215; Topic 10: 222, 231, 238, 240; Topic 11: 281, 287, 290-291; Topic 12: 301; Topic 14: 345, 353; Topic 15: 376-377, 378-379, 380-381, 382-385; Topic 16: 402, 415; Topic 17: 426-429, 430-433, 434-437, 438-441, 442-443; Topic 18: 457, 458-461, 462-463, 464-465; Topic 19: 488, 489, 493, 500, 501 **TE:** Topic 6: 144B; Topic 7: 174B; Topic 9: 200B; Topic 11: 270B; Topic 14: 344B, 362B; Topic 15: 372B; Topic 16: 398B; Topic 17: 438B

Common Core State Standards for Mathematics Grade 6	***enVisionMATH Common Core* Grade 6**
Ratios and Proportional Relationships	
Understand ratio concepts and use ratio reasoning to solve problems.	
1. Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. [6.RP.1]	**SE / TE:** Topic 7: 178-179; Topic 12: 300-301 **TE**: Topic 7: 178A-178B, 179A-179B; Topic 12: 300A-300B, 301A-301B
2. Understand the concept of a unit rate a/b associated with a ratio $a:b$ with $b \neq 0$, and use rate language in the context of a ratio relationship. [6.RP.2]	**SE / TE:** Topic 12: 306-307, 314-315; Topic 13: 324-325 **TE**: Topic 12: 306A-306B, 307A-307B, 314A-314B, 315A-315B; Topic 13: 324A-324B, 325A-325B
3. Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations. [6.RP.3]	**SE / TE:** Topic 12: 302-305; Topic 13: 322-323, 326-327, 328-329, 344-347, 348-349, 352-353 **TE:** Topic 12: 302A-302B, 305A-305B; Topic 13: 322A-322B, 323A-323B, 326A-326A, 327B-327B, 328A-328B, 329A-329B, 344A-344B, 347A-347B, 348A-348B, 349A-349B, 352A-352B, 352A-353B
a. Make tables of equivalent ratios relating quantities with whole number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios. [6.RP.3.a]	**SE / TE:** Topic 13: 322-323, 330-333 **TE:** Topic 13: 322A-322B, 323A-323B, 330A-330B, 333A-333B
b. Solve unit rate problems including those involving unit pricing and constant speed. [6.RP.3.b]	**SE / TE:** Topic 12: 308-209; Topic 13: 324-325 **TE:** Topic 12: 308A-308B, 309A-309B; Topic 13: 324A-324B, 325A-325B

Common Core State Standards for Mathematics Grade 6	***enVisionMATH Common Core* Grade 6**
c. Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent. [6.RP.3.c]	**SE/TE:** Topic 14: 350-351, 354-357, 358-361, 362-363 **TE:** Topic 14: 350A-350B, 351A-351B, 354A-354B, 357A-357B, 358A-358B, 361A-361B, 362A-362B, 363A-363B
d. Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities. [6.RP.3.d]	**SE/TE:** Topic 16: 400-403,404-407, 408-411, 412-413, 414-417, 418-419 **TE:** Topic 16: 400A-400B, 403A-403B,404A-404B, 407A-407B, 408A-408B, 411A-411B, 412A-412B, 413A-413B, 417A-417B, 418A-418B, 419A-419B
The Number System	
Apply and extend previous understandings of multiplication and division to divide fractions by fractions.	
1. Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem. [6.NS.1]	**SE/TE:** Topic 5: 128-131, 132-133, 134-135; Topic 6 144-145, 146-147, 148-149, 150-153, 158-159; Topic 7: 162-163, 166-169, 170-171, 172-173, 174-177; Topic 8: 186-187, 188-189, 190-191, 192-193; Topic 9: 202-203, 204-205, 206-207, 208-209, 210-211 **TE:** Topic 5: 128A-128B, 131A-131B, 132A-132B, 133A-133B, 134A-134B, 135A-135B; Topic 6 144A-144B, 145A-145B, 146A-146B, 147A-147B, 148A-148B, 149A-149B, 150A-150B, 153A-153B 158A-158B, 159A-159B; Topic 7: 162A-162B, 163A-163B, 166A-166B, 169A-169B, 170A-170B, 171A-171B, 172A-172B, 173A-173B, 174A-174B, 177A-177B; Topic 8: 186A-186B, 187A-187B, 188A-188B, 189A-189B, 190A-190B, 191A-191B, 192A-192B, 193A-193B; Topic 9: 202A-202B, 203A-203B, 204A-204B, 205A-205B, 206A-206B, 207A-207B, 208A-208B, 209A-209B, 210A-210B, 211A-211B
Compute fluently with multi-digit numbers and find common factors and multiples.	
2. Fluently divide multi-digit numbers using the standard algorithm. [6.NS.2]	**SE/TE**: Topic 2: 46-47; Topic 3: 74-75; Topic 4: 106-109 **TE**: Topic 2: 46A-46B, 47A-47B; Topic 3: 74A-74B, 75A-75B; Topic 4: 106A-106B, 109A-109B

Common Core State Standards for Mathematics Grade 6	***enVisionMATH Common Core* Grade 6**
3. Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation. [6.NS.3]	**SE / TE:** Topic 1: 18-21; Topic 3: 62-63, 64-65, 66-69, 70-73, 76-77, 78-79, 84-87; Topic 6: 154-55 **TE:** Topic 1: 18A-18B, 21A-21B, 22A-22B; Topic 3: 62A-62B, 63A-63B, 64A-64B, 65A-65B, 66A-66B, 69A-69B, 70A-70B, 73A-73B, 76A-76B, 77A-77B, 78A-78B, 79A-79B, 84A-84B, 87A-87B; Topic 6: 154A-154B, 155A-155B
4. Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor. [6.NS.4]	**SE / TE:** Topic 5: 126-127; Topic 7: 164-165 **TE:** Topic 5: 126A-126B, 127A-127B; Topic 7: 164A-164B, 165A-165B
Apply and extend previous understandings of numbers to the system of rational numbers.	
5. Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation. [6.NS.5]	**SE / TE:** Topic 10: 222-223, 256 **TE:** Topic 10: 222A-222B, 223A-223B
6. Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates. [6.NS.6]	**SE / TE:** Topic 9: 214-215; Topic 10: 222-223, 226-229, 246-249 **TE:** Topic 9: 214A-214B, 215A-215B; Topic 10: 222A-222B, 223A-223B, 226A-226B, 229A-229B, 246A-246B, 249A-249B
a. Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself, e.g., –(–3) = 3, and that 0 is its own opposite. [6.NS.6.a]	**SE / TE**: Topic: 10: 222-223, 242-245 **TE**: Topic 10: 222A-222B, 223A-223B, 242A-242B, 245A-245B

Common Core State Standards for Mathematics Grade 6	***enVisionMATH Common Core* Grade 6**
b. Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane; recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes. [6.NS.6.b]	**SE / TE:** Topic 10: 242-245, 246-249 **TE:** Topic 10: 242A-242B, 245A-245B, 246A-246B, 249A-249B
c. Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane. [6.NS.6.c]	**SE / TE:** Topic 10: 222-223, 226-229, 246-249 **TE:** Topic 10: 222A-222B, 223A-223B, 226A-226B, 229A-229B, 246A-246B, 249A-249B
7. Understand ordering and absolute value of rational numbers. [6.NS.7]	**SE / TE:** Topic 10: 222-223, 224-225, 226-229, 242-245 **TE:** Topic 10: 222A-222B, 223A-223B, 224A-224B, 225A-225B, 226A-226B, 229A-229B, 242A-242B, 245A-245B
a. Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram. [6.NS.7.a]	**SE / TE:** Topic 10: 224-225, 226-229 **TE:** Topic 10: 224A-224B, 225A-225B, 226A-226B, 229A-229B
b. Write, interpret, and explain statements of order for rational numbers in real-world contexts. [6.NS.7.b]	**SE / TE:** Topic 10: 224-225, 226-229 **TE:** Topic 10: 224A-224B, 225A-225B, 226A-226B, 229A-229B
c. Understand the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as magnitude for a positive or negative quantity in a real-world situation. [6.NS.7.c]	**SE / TE:** Topic 10: 222-223, 242-245 **TE:** Topic 10: 222A-222B, 223A-223B, 242A-242B, 245A-245B
d. Distinguish comparisons of absolute value from statements about order. [6.NS.7.d]	**SE / TE:** Topic 10: 242-245 **TE:** Topic 10: 242A-242B, 245A-245B
8. Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate. [6.NS.8]	**SE / TE:** Topic 10: 246-249, 250-253 **TE:** Topic 10: 246A-246B, 249A-249B, 250A-250B, 253A-253B

Common Core State Standards for Mathematics Grade 6	***enVisionMATH Common Core* Grade 6**
Expressions and Equations	
Apply and extend previous understandings of arithmetic to algebraic expressions.	
1. Write and evaluate numerical expressions involving whole-number exponents. [6.EE.1]	**SE / TE:** Topic 1: 10-13 **TE:** Topic 10: 10A-10B, 13A-13B
2. Write, read, and evaluate expressions in which letters stand for numbers. [6.EE.2]	**SE / TE:** Topic 2: 32-33, 46-47, 48-49 **TE:** Topic 2: 32A-32B, 33A-33B, 46A-46B, 47A-47B, 48A-48B, 49A-49B
a. Write expressions that record operations with numbers and with letters standing for numbers. [6.EE.2.a]	**SE / TE:** Topic 2: 32-33, 46-47 **TE:** Topic 2: 32A-32B, 33A-33B, 46A-46B, 47A-47B
b. Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity. [6.EE.2.b]	**SE / TE:** Topic 2: 32-33, 46-47 **TE:** Topic 2: 32A-32B, 33A-33B, 46A-46B, 47A-47B
c. Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations). [6.EE.2.c]	**SE / TE:** Topic 2: 46-47; Topic 3: 80-81; Topic 17: 426-429, 430-433, 434-437, 450 **TE:** Topic 2: 46A-46B, 47A-47B; Topic 3: 80A-80B, 81A-81B; Topic 17: 426A-426B, 429A-429B, 430A-430B, 433A-433B, 434A-434B, 437A-437B
3. Apply the properties of operations to generate equivalent expressions. [6.EE.3]	**SE / TE:** Topic 2: 34-35, 36-39, 40-41, 46-47; Topic 4: 96-97 **TE:** Topic 2: 34A-34B, 35A-35B, 36A-36B, 39A-39B, 40A-40B, 41A-41B, 46A-46B, 47A-47B; Topic 4: 96A-96B, 97A-97B
4. Identify when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them). [6.EE.4]	**SE / TE:** Topic 4: 96-97 **TE:** Topic 4: 96A-96B, 97A-97B

Common Core State Standards for Mathematics Grade 6	***enVisionMATH Common Core* Grade 6**
Reason about and solve one-variable equations and inequalities.	
5. Understand solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true. [6.EE.5]	**SE / TE:** Topic 3: 82-83; Topic 4: 98-101, 106-109; Topic 15: 386-389, 390-391 **TE:** Topic 3: 82A-82B, 83A-83B; Topic 4: 98A-98B, 101A-101B, 106A-106B, 109A-109B; Topic 15: 386A-386B, 389A-389B, 390A-390B, 391A-391B
6. Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set. [6.EE.6]	**SE / TE:** Topic 2: 32-33, 50-53; Topic 3: 82-83; Topic 4: 98-101, 106-109 **TE:** Topic 2: 32A-32B, 33A-33B, 50A-50B, 53A-53B; Topic 3: 82A-82B, 83A-83B; Topic 4: 98A-98B, 101A-101B, 106A-106B, 109A-109B
7. Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which p, q and x are all nonnegative rational numbers. [6.EE.7]	**SE / TE:** Topic 4: 98-101, 102-105, 106-109, 110-113; Topic 9: 212-213; Topic 15: 372-375; Topic 17: 426-429, 430-433, 434-437 **TE:** Topic 4: 98A-98B, 98A-98B, 101A-101B, 102A-102B, 105A-105B, 106A-106B, 109A-109B, 110A-110B, 113A-113B; Topic 9: 212A-212B, 213A-213B; Topic 15: 372A-372B, 375A-375B; Topic 17: 426A-426B, 429A-429B, 430A-430B, 433A-433B, 434A-434B, 437A-437B
8. Write an inequality of the form $x > c$ or $x < c$ to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form $x > c$ or $x < c$ have infinitely many solutions; represent solutions of such inequalities on number line diagrams. [6.EE.8]	**SE / TE:** Topic 15: 386-389 **TE:** Topic 15: 386A-386B, 389A-389B

Common Core State Standards for Mathematics Grade 6	***enVisionMATH Common Core* Grade 6**
Represent and analyze quantitative relationships between dependent and independent variables.	
9. Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation. [6.EE.9]	**SE / TE:** Topic 11: 290-291; Topic 12: 310-311; Topic 15: 376-377, 378-379, 380-381, 382-385 **TE:** Topic 11: 290A-290B, 291A-291B; Topic 12: 310A-310B, 313A-313B; Topic 15: 376A-376B, 377A-377B, 378A-378B, 378A-379B, 380A-380B, 381A-381B, 382A-382B, 385A-385B
Geometry	
Solve real-world and mathematical problems involving area, surface area, and volume.	
1. Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems. [6.G.1]	**SE / TE:** Topic 17: 430-433, 434-437 **TE:** Topic 17: 430A-430B, 433A-433B, 434A-434B, 437A-437B
2. Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas $V = l \times w \times h$ and $V = bh$ to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems. [6.G.2]	**SE / TE:** Topic 18: 462-463, 464-465 **TE:** Topic 18: 462A-462B, 463A-463B, 464A-464B, 465A-465B
3. Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems. [6.G.3]	**SE / TE:** Topic 10: 250-253; Topic 11: 262-265 **TE:** Topic 10: 250A-250B, 253A-253B; Topic 11: 262A-262B, 265A-265B

Common Core State Standards for Mathematics Grade 6	***enVisionMATH Common Core* Grade 6**
4. Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems. [6.G.4]	**SE / TE:** Topic 17: 444-447; Topic 18: 454-457, 458-461, 466-469 **TE:** Topic 17: 444A-444B, 447A-447B; Topic 18: 454A-454B, 457A-457B, 458A-458B, 461A-461B, 466A-466B, 469A-469B
Statistics and Probability	
Develop understanding of statistical variability.	
1. Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers. [6.SP.1]	**SE / TE:** Topic 19: 476-477 **TE:** Topic 19: 476A-476B, 477A-477B
2. Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape. [6.SP.2]	**SE / TE:** Topic 19: 478-479 **TE:** Topic 19: 478A-478B, 479A-479B
3. Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number. [6.SP.3]	**SE / TE:** Topic 19: 480-481, 490-493, 500-501 **TE:** Topic 19: 480A-480B, 481A-481B, 490A-490B, 493A-493B, 500A-500B, 501A-501B
Summarize and describe distributions.	
4. Display numerical data in plots on a number line, including dot plots, histograms, and box plots. [6.SP.4]	**SE / TE:** Topic 19: 484-487, 488-489 **TE:** Topic 19: 484A-484B, 487A-487B, 488A-488B, 489A-489B
5. Summarize numerical data sets in relation to their context, such as by: [6.SP.5]	**SE / TE:** Topic 19: 494-497, 498-499 **TE:** Topic 19: 494A-494B, 497A-497B, 498A-498B, 499A-499B
a. Reporting the number of observations. [6.SP.5.a]	**SE / TE:** Topic 19: 484-487, 498-499 **TE:** Topic 19: 484A-484B, 487A-487B, 498A-498B, 499A-499B

Common Core State Standards for Mathematics Grade 6	***enVisionMATH Common Core* Grade 6**
b. Describing the nature of the attribute under investigation, including how it was measured and its units of measurement. [6.SP.5.b]	**SE / TE:** Topic 19: 476-477, 498-499 **TE:** Topic 19: 476A-476B, 477A-477B, 498A-498B, 499A-499B
c. Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered. [6.SP.5.c]	**SE / TE:** Topic 19: 480-481, 482-483, 490-493, 498-499 **TE:** Topic 19: 480A-480B, 481A-481B, 482A-482B, 483A-483B, 490A-490B, 493A-493B, 498A-498B, 499A-499B
d. Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered. [6.SP.5.d]	**SE / TE:** Topic 19: 494-497, 498-499 **TE:** Topic 19: 494A-494B, 497A-497B, 498A-498B, 499A-499B