

Louisiana Curriculum Matrix for Mathematics

| Strands/ Grade-Level Expectations/ Benchmark References Grade 7 | Common Core Mathematics Domains/Clusters/Standards Grade 7 | National Essential Skills Study (NESS) Rankings Rank | NESS | iLEAP | Priority | |
|---|--|---|--|-------|----------|---|
| Number and Number Relations | | | | | | |
| 1. Recognize and compute equivalent representations of fractions, decimals, and percents (i.e., halves, thirds, fourths, fifths, eighths, tenths, hundredths) (N-1-M) | <p><u>The Number System</u> Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.</p> <p>2. Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.</p> <p>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 p and q are integers, then $-(p/q) = (-p)/q = p/(-q)$. Interpret quotients of rational numbers by describing real-world contexts.</p> <p>d. 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.</p> | M35 | Use the properties of real (rational and irrational) numbers and demonstrate understanding of ordering and absolute value. | M | H | H |
| 2. Compare positive fractions, decimals, percents, and integers using symbols (i.e., $<$, \leq , $=$, \geq , $>$) and position on a number line (N-2-M) | <i>There is no Louisiana Mathematics Learning Expectation-Common Core alignment.</i> | M35 | Use the properties of real (rational and irrational) numbers and demonstrate understanding of ordering and absolute value. | M | H | H |
| | | M10 | Understand and apply a systematic methodology or procedure (e.g., direct or indirect measurement, direct or indirect proof, inductive or deductive reasoning) to model and solve problems. | | | |

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| 7. Select and discuss appropriate operations and solve single- and multi-step, real-life problems involving positive fractions, percents, mixed numbers, decimals, and positive and negative integers (N-5-M) (N-3-M) (N-4-M) | <p><u>Ratios and Proportional Relationships</u> Analyze proportional relationships and use them to solve real-world and mathematical problems. 3. Use proportional relationships to solve multistep ratio and percent problems. <i>Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error.</i></p> | M7 | Simplify and solve algebraic equations by identifying and using the correct order of operations and techniques necessary to carry out the solution. | | | |
| | <p><u>The Number System</u> Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers. 1. Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram. a. Describe situations in which opposite quantities combine to make 0. <i>For example, a hydrogen atom has 0 charge because its two constituents are oppositely charged.</i> c. Understand subtraction of rational numbers as adding the additive inverse, $p - q = p + (-q)$. 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. d. Apply properties of operations as strategies to add and subtract rational numbers. 2. Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.</p> | M10 | Understand and apply a systematic methodology or procedure (e.g., direct or indirect measurement, direct or indirect proof, inductive or deductive reasoning) to model and solve problems. | H | H | H |

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| 8. Determine the reasonableness of answers involving positive fractions and decimals by comparing them to estimates (N-6-M) (N-7-M) | <p><u>Expressions & Equations</u> Solve real-life and mathematical problems using numerical and algebraic expressions and equations.</p> <p>3. 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. <i>For example: 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. If you want to place a towel bar 9 3/4 inches long in the center of a door that is 27 1/2 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.</i></p> | M1 | Perform operations fluently with positive and negative numbers, including decimals, ratios, percents, and fractions, and show reasoning to justify results. | H | L | M |
| | | M10 | Understand and apply a systematic methodology or procedure (e.g., direct or indirect measurement, direct or indirect proof, inductive or deductive reasoning) to model and solve problems. | | | |