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| **Subject** | **Chapter 111. Mathematics** | | | |
| **Course Title** | **§111.5. Math, Grade 3, Beginning with School Year 2014-2015** | | | |
| **TEKS (Knowledge and Skills)** | **Student Expectation** | **Breakout** | **Element** | **Subelement** |
| **(a) Introduction.** | | | | |
| (1) The desire to achieve educational excellence is the driving force behind the Texas essential knowledge and skills for mathematics, guided by the college and career readiness standards. By embedding statistics, probability, and finance, while focusing on computational thinking, mathematical fluency, and solid understanding, Texas will lead the way in mathematics education and prepare all Texas students for the challenges they will face in the 21st century. | | | | |
| (2) The process standards describe ways in which students are expected to engage in the content. The placement of the process standards at the beginning of the knowledge and skills listed for each grade and course is intentional. The process standards weave the other knowledge and skills together so that students may be successful problem solvers and use mathematics efficiently and effectively in daily life. The process standards are integrated at every grade level and course. When possible, students will apply mathematics to problems arising in everyday life, society, and the workplace. Students will use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution. Students will select appropriate tools such as real objects, manipulatives, algorithms, paper and pencil, and technology and techniques such as mental math, estimation, number sense, and generalization and abstraction to solve problems. Students will effectively communicate mathematical ideas, reasoning, and their implications using multiple representations such as symbols, diagrams, graphs, computer programs, and language. Students will use mathematical relationships to generate solutions and make connections and predictions. Students will analyze mathematical relationships to connect and communicate mathematical ideas. Students will display, explain, or justify mathematical ideas and arguments using precise mathematical language in written or oral communication. | | | | |
| (3) For students to become fluent in mathematics, students must develop a robust sense of number. The National Research Council's report, "Adding It Up," defines procedural fluency as "skill in carrying out procedures flexibly, accurately, efficiently, and appropriately." As students develop procedural fluency, they must also realize that true problem solving may take time, effort, and perseverance. Students in Grade 3 are expected to perform their work without the use of calculators. | | | | |
| (4) The primary focal areas in Grade 3 are place value, operations of whole numbers, and understanding fractional units. These focal areas are supported throughout the mathematical strands of number and operations, algebraic reasoning, geometry and measurement, and data analysis. In Grades 3-5, the number set is limited to positive rational numbers. In number and operations, students will focus on applying place value, comparing and ordering whole numbers, connecting multiplication and division, and understanding and representing fractions as numbers and equivalent fractions. In algebraic reasoning, students will use multiple representations of problem situations, determine missing values in number sentences, and represent real-world relationships using number pairs in a table and verbal descriptions. In geometry and measurement, students will identify and classify two-dimensional figures according to common attributes, decompose composite figures formed by rectangles to determine area, determine the perimeter of polygons, solve problems involving time, and measure liquid volume (capacity) or weight. In data analysis, students will represent and interpret data. | | | | |
| (5) Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples. | | | | |
| **(b) Knowledge and skills.** | | | | |
| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (A) apply mathematics to problems arising in everyday life, society, and the workplace | (i) apply mathematics to problems arising in everyday life | | |

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| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (A) apply mathematics to problems arising in everyday life, society, and the workplace | (ii) apply mathematics to problems arising in society | | |
| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (A) apply mathematics to problems arising in everyday life, society, and the workplace | (iii) apply mathematics to problems arising in the workplace | | |
| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (B) use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution | (i) use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process | | |
| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (B) use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution | (ii) use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the reasonableness of the solution | | |
| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (C) select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems | (i) select tools, including real objects as appropriate, to solve problems | | |

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| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (C) select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems | (ii) select tools, including manipulatives as appropriate, to solve problems | | |
| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (C) select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems | (iii) select tools, including paper and pencil as appropriate, to solve problems | | |
| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (C) select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems | (iv) select tools, including technology as appropriate, to solve problems | | |
| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (C) select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems | (v) select techniques, including mental math as appropriate, to solve problems | | |
| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (C) select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems | (vi) select techniques, including estimation as appropriate, to solve problems | | |

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| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (C) select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems | (vii) select techniques, including number sense as appropriate, to solve problems | | |
| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate | (i) communicate mathematical ideas using multiple representations, including symbols as appropriate | | |
| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate | (ii) communicate mathematical ideas using multiple representations, including diagrams as appropriate | | |
| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate | (iii) communicate mathematical ideas using multiple representations, including graphs as appropriate | | |
| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate | (iv) communicate mathematical ideas using multiple representations, including language as appropriate | | |

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| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate | (v) communicate mathematical reasoning using multiple representations, including symbols as appropriate | | |
| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate | (vi) communicate mathematical reasoning using multiple representations, including diagrams as appropriate | | |
| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate | (vii) communicate mathematical reasoning using multiple representations, including graphs as appropriate | | |
| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate | (viii) communicate mathematical reasoning using multiple representations, including language as appropriate | | |
| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate | (ix) communicate [mathematical ideas'] implications using multiple representations, including symbols as appropriate | | |

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| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate | (x) communicate [mathematical ideas'] implications using multiple representations, including diagrams as appropriate | | |
| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate | (xi) communicate [mathematical ideas'] implications using multiple representations, including graphs as appropriate | | |
| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate | (xii) communicate [mathematical ideas'] implications using multiple representations, including language as appropriate | | |
| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate | (xiii) communicate [mathematical reasoning's] implications using multiple representations, including symbols as appropriate | | |
| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate | (xiv) communicate [mathematical reasoning's] implications using multiple representations, including diagrams as appropriate | | |

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| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate | (xv) communicate [mathematical reasoning's] implications using multiple representations, including graphs as appropriate | | |
| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate | (xvi) communicate [mathematical reasoning's] implications using multiple representations, including language as appropriate | | |
| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (E) create and use representations to organize, record, and communicate mathematical ideas | (i) create representations to organize mathematical ideas | | |
| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (E) create and use representations to organize, record, and communicate mathematical ideas | (ii) use representations to organize mathematical ideas | | |
| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (E) create and use representations to organize, record, and communicate mathematical ideas | (iii) create representations to record mathematical ideas | | |

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| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (E) create and use representations to organize, record, and communicate mathematical ideas | (iv) use representations to record mathematical ideas | | |
| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (E) create and use representations to organize, record, and communicate mathematical ideas | (v) create representations to communicate mathematical ideas | | |
| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (E) create and use representations to organize, record, and communicate mathematical ideas | (vi) use representations to communicate mathematical ideas | | |
| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (F) analyze mathematical relationships to connect and communicate mathematical ideas | (i) analyze mathematical relationships to connect mathematical ideas | | |
| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (F) analyze mathematical relationships to connect and communicate mathematical ideas | (ii) analyze mathematical relationships to communicate mathematical ideas | | |

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| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (G) display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication | (i) display mathematical ideas using precise mathematical language in written or oral communication | | |
| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (G) display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication | (ii) display mathematical arguments using precise mathematical language in written or oral communication | | |
| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (G) display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication | (iii) explain mathematical ideas using precise mathematical language in written or oral communication | | |
| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (G) display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication | (iv) explain mathematical arguments using precise mathematical language in written or oral communication | | |
| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (G) display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication | (v) justify mathematical ideas using precise mathematical language in written or oral communication | | |

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| (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | (G) display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication | (vi) justify mathematical arguments using precise mathematical language in written or oral communication | | |
| (2) Number and operations. The student applies mathematical process standards to represent and compare whole numbers and understand relationships related to place value. The student is expected to: | (A) compose and decompose numbers up to 100,000 as a sum of so many ten thousands, so many thousands, so many hundreds, so many tens, and so many ones using objects, pictorial models, and numbers, including expanded notation as appropriate | (i) compose numbers up to 100,000 as a sum of so many ten thousands, so many thousands, so many hundreds, so many tens, and so many ones using objects | | |
| (2) Number and operations. The student applies mathematical process standards to represent and compare whole numbers and understand relationships related to place value. The student is expected to: | (A) compose and decompose numbers up to 100,000 as a sum of so many ten thousands, so many thousands, so many hundreds, so many tens, and so many ones using objects, pictorial models, and numbers, including expanded notation as appropriate | (ii) compose numbers up to 100,000 as a sum of so many ten thousands, so many thousands, so many hundreds, so many tens, and so many ones using pictorial models | | |
| (2) Number and operations. The student applies mathematical process standards to represent and compare whole numbers and understand relationships related to place value. The student is expected to: | (A) compose and decompose numbers up to 100,000 as a sum of so many ten thousands, so many thousands, so many hundreds, so many tens, and so many ones using objects, pictorial models, and numbers, including expanded notation as appropriate | (iii) compose numbers up to 100,000 as a sum of so many ten thousands, so many thousands, so many hundreds, so many tens, and so many ones using numbers, including expanded notation as appropriate | | |

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| (2) Number and operations. The student applies mathematical process standards to represent and compare whole numbers and understand relationships related to place value. The student is expected to: | (A) compose and decompose numbers up to 100,000 as a sum of so many ten thousands, so many thousands, so many hundreds, so many tens, and so many ones using objects, pictorial models, and numbers, including expanded notation as appropriate | (iv) decompose numbers up to 100,000 as a sum of so many ten thousands, so many thousands, so many hundreds, so many tens, and so many ones using objects | | |
| (2) Number and operations. The student applies mathematical process standards to represent and compare whole numbers and understand relationships related to place value. The student is expected to: | (A) compose and decompose numbers up to 100,000 as a sum of so many ten thousands, so many thousands, so many hundreds, so many tens, and so many ones using objects, pictorial models, and numbers, including expanded notation as appropriate | (v) decompose numbers up to 100,000 as a sum of so many ten thousands, so many thousands, so many hundreds, so many tens, and so many ones using pictorial models | | |
| (2) Number and operations. The student applies mathematical process standards to represent and compare whole numbers and understand relationships related to place value. The student is expected to: | (A) compose and decompose numbers up to 100,000 as a sum of so many ten thousands, so many thousands, so many hundreds, so many tens, and so many ones using objects, pictorial models, and numbers, including expanded notation as appropriate | (vi) decompose numbers up to 100,000 as a sum of so many ten thousands, so many thousands, so many hundreds, so many tens, and so many ones using numbers, including expanded notation as appropriate | | |
| (2) Number and operations. The student applies mathematical process standards to represent and compare whole numbers and understand relationships related to place value. The student is expected to: | (B) describe the mathematical relationships found in the base-10 place value system through the hundred thousands place | | | |

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| (2) Number and operations. The student applies mathematical process standards to represent and compare whole numbers and understand relationships related to place value. The student is expected to: | (C) represent a number on a number line as being between two consecutive multiples of 10; 100; 1,000; or 10,000 and use words to describe relative size of numbers in order to round whole numbers | (i) represent a number on a number line as being between two consecutive multiples of 10; 100; 1,000; or 10,000 | | |
| (2) Number and operations. The student applies mathematical process standards to represent and compare whole numbers and understand relationships related to place value. The student is expected to: | (C) represent a number on a number line as being between two consecutive multiples of 10; 100; 1,000; or 10,000 and use words to describe relative size of numbers in order to round whole numbers | (ii) use words to describe relative size of numbers in order to round whole numbers | | |
| (2) Number and operations. The student applies mathematical process standards to represent and compare whole numbers and understand relationships related to place value. The student is expected to: | (D) compare and order whole numbers up to 100,000 and represent comparisons using the symbols >, <, or = | (i) compare whole numbers up to 100,000 | | |
| (2) Number and operations. The student applies mathematical process standards to represent and compare whole numbers and understand relationships related to place value. The student is expected to: | (D) compare and order whole numbers up to 100,000 and represent comparisons using the symbols >, <, or = | (ii) order whole numbers up to 100,000 | | |

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| (2) Number and operations. The student applies mathematical process standards to represent and compare whole numbers and understand relationships related to place value. The student is expected to: | (D) compare and order whole numbers up to 100,000 and represent comparisons using the symbols >, <, or = | (iii) represent comparisons using the symbols >, <, or = | | |
| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (A) represent fractions greater than zero and less than or equal to one with denominators of 2, 3, 4, 6, and 8 using concrete objects and pictorial models, including strip diagrams and number lines | (i) represent fractions greater than zero and less than or equal to one with denominators of 2 using concrete objects | | |
| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (A) represent fractions greater than zero and less than or equal to one with denominators of 2, 3, 4, 6, and 8 using concrete objects and pictorial models, including strip diagrams and number lines | (ii) represent fractions greater than zero and less than or equal to one with denominators of 3 using concrete objects | | |
| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (A) represent fractions greater than zero and less than or equal to one with denominators of 2, 3, 4, 6, and 8 using concrete objects and pictorial models, including strip diagrams and number lines | (iii) represent fractions greater than zero and less than or equal to one with denominators of 4 using concrete objects | | |
| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (A) represent fractions greater than zero and less than or equal to one with denominators of 2, 3, 4, 6, and 8 using concrete objects and pictorial models, including strip diagrams and number lines | (iv) represent fractions greater than zero and less than or equal to one with denominators of 6 using concrete objects | | |

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| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (A) represent fractions greater than zero and less than or equal to one with denominators of 2, 3, 4, 6, and 8 using concrete objects and pictorial models, including strip diagrams and number lines | (v) represent fractions greater than zero and less than or equal to one with denominators of 8 using concrete objects | | |
| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (A) represent fractions greater than zero and less than or equal to one with denominators of 2, 3, 4, 6, and 8 using concrete objects and pictorial models, including strip diagrams and number lines | (vi) represent fractions greater than zero and less than or equal to one with denominators of 2 using pictorial models, including strip diagrams | | |
| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (A) represent fractions greater than zero and less than or equal to one with denominators of 2, 3, 4, 6, and 8 using concrete objects and pictorial models, including strip diagrams and number lines | (vii) represent fractions greater than zero and less than or equal to one with denominators of 3 using pictorial models, including strip diagrams | | |
| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (A) represent fractions greater than zero and less than or equal to one with denominators of 2, 3, 4, 6, and 8 using concrete objects and pictorial models, including strip diagrams and number lines | (viii) represent fractions greater than zero and less than or equal to one with denominators of 4 using pictorial models, including strip diagrams | | |
| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (A) represent fractions greater than zero and less than or equal to one with denominators of 2, 3, 4, 6, and 8 using concrete objects and pictorial models, including strip diagrams and number lines | (ix) represent fractions greater than zero and less than or equal to one with denominators of 6 using pictorial models, including strip diagrams | | |

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| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (A) represent fractions greater than zero and less than or equal to one with denominators of 2, 3, 4, 6, and 8 using concrete objects and pictorial models, including strip diagrams and number lines | (x) represent fractions greater than zero and less than or equal to one with denominators of 8 using pictorial models, including strip diagrams | | |
| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (A) represent fractions greater than zero and less than or equal to one with denominators of 2, 3, 4, 6, and 8 using concrete objects and pictorial models, including strip diagrams and number lines | (xi) represent fractions greater than zero and less than or equal to one with denominators of 2 using pictorial models, including number lines | | |
| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (A) represent fractions greater than zero and less than or equal to one with denominators of 2, 3, 4, 6, and 8 using concrete objects and pictorial models, including strip diagrams and number lines | (xii) represent fractions greater than zero and less than or equal to one with denominators of 3 using pictorial models, including number lines | | |
| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (A) represent fractions greater than zero and less than or equal to one with denominators of 2, 3, 4, 6, and 8 using concrete objects and pictorial models, including strip diagrams and number lines | (xiii) represent fractions greater than zero and less than or equal to one with denominators of 4 using pictorial models, including number lines | | |
| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (A) represent fractions greater than zero and less than or equal to one with denominators of 2, 3, 4, 6, and 8 using concrete objects and pictorial models, including strip diagrams and number lines | (xiv) represent fractions greater than zero and less than or equal to one with denominators of 6 using pictorial models, including number lines | | |

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| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (A) represent fractions greater than zero and less than or equal to one with denominators of 2, 3, 4, 6, and 8 using concrete objects and pictorial models, including strip diagrams and number lines | (xv) represent fractions greater than zero and less than or equal to one with denominators of 8 using pictorial models, including number lines | | |
| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (B) determine the corresponding fraction greater than zero and less than or equal to one with denominators of 2, 3, 4, 6, and 8 given a specified point on a number line | (i) determine the corresponding fraction greater than zero and less than or equal to one with [a] denominator of 2 given a specified point on a number line | | |
| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (B) determine the corresponding fraction greater than zero and less than or equal to one with denominators of 2, 3, 4, 6, and 8 given a specified point on a number line | (ii) determine the corresponding fraction greater than zero and less than or equal to one with [a] denominator of 3 given a specified point on a number line | | |
| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (B) determine the corresponding fraction greater than zero and less than or equal to one with denominators of 2, 3, 4, 6, and 8 given a specified point on a number line | (iii) determine the corresponding fraction greater than zero and less than or equal to one with [a] denominator of 4 given a specified point on a number line | | |
| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (B) determine the corresponding fraction greater than zero and less than or equal to one with denominators of 2, 3, 4, 6, and 8 given a specified point on a number line | (iv) determine the corresponding fraction greater than zero and less than or equal to one with [a] denominator of 6 given a specified point on a number line | | |

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| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (B) determine the corresponding fraction greater than zero and less than or equal to one with denominators of 2, 3, 4, 6, and 8 given a specified point on a number line | (v) determine the corresponding fraction greater than zero and less than or equal to one with [a] denominator of 8 given a specified point on a number line | | |
| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (C) explain that the unit fraction 1/b represents the quantity formed by one part of a whole that has been partitioned into b equal parts where b is a non-zero whole number | | | |
| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (D) compose and decompose a fraction a/b with a numerator greater than zero and less than or equal to b as a sum of parts 1/b | (i) compose a fraction a/b with a numerator greater than zero and less than or equal to b as a sum of parts 1/b | | |
| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (D) compose and decompose a fraction a/b with a numerator greater than zero and less than or equal to b as a sum of parts 1/b | (ii) decompose a fraction a/b with a numerator greater than zero and less than or equal to b as a sum of parts 1/b | | |
| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (E) solve problems involving partitioning an object or a set of objects among two or more recipients using pictorial representations of fractions with denominators of 2, 3, 4, 6, and 8 | (i) solve problems involving partitioning an object or a set of objects among two or more recipients using pictorial representations of fractions with denominators of 2 | | |
| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (E) solve problems involving partitioning an object or a set of objects among two or more recipients using pictorial representations of fractions with denominators of 2, 3, 4, 6, and 8 | (ii) solve problems involving partitioning an object or a set of objects among two or more recipients using pictorial representations of fractions with denominators of 3 | | |

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| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (E) solve problems involving partitioning an object or a set of objects among two or more recipients using pictorial representations of fractions with denominators of 2, 3, 4, 6, and 8 | (iii) solve problems involving partitioning an object or a set of objects among two or more recipients using pictorial representations of fractions with denominators of 4 | | |
| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (E) solve problems involving partitioning an object or a set of objects among two or more recipients using pictorial representations of fractions with denominators of 2, 3, 4, 6, and 8 | (iv) solve problems involving partitioning an object or a set of objects among two or more recipients using pictorial representations of fractions with denominators of 6 | | |
| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (E) solve problems involving partitioning an object or a set of objects among two or more recipients using pictorial representations of fractions with denominators of 2, 3, 4, 6, and 8 | (v) solve problems involving partitioning an object or a set of objects among two or more recipients using pictorial representations of fractions with denominators of 8 | | |
| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (F) represent equivalent fractions with denominators of 2, 3, 4, 6, and 8 using a variety of objects and pictorial models, including number lines | (i) represent equivalent fractions with denominators of 2 using a variety of objects | | |
| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (F) represent equivalent fractions with denominators of 2, 3, 4, 6, and 8 using a variety of objects and pictorial models, including number lines | (ii) represent equivalent fractions with denominators of 3 using a variety of objects | | |
| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (F) represent equivalent fractions with denominators of 2, 3, 4, 6, and 8 using a variety of objects and pictorial models, including number lines | (iii) represent equivalent fractions with denominators of 4 using a variety of objects | | |

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| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (F) represent equivalent fractions with denominators of 2, 3, 4, 6, and 8 using a variety of objects and pictorial models, including number lines | (iv) represent equivalent fractions with denominators of 6 using a variety of objects | | |
| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (F) represent equivalent fractions with denominators of 2, 3, 4, 6, and 8 using a variety of objects and pictorial models, including number lines | (v) represent equivalent fractions with denominators of 8 using a variety of objects | | |
| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (F) represent equivalent fractions with denominators of 2, 3, 4, 6, and 8 using a variety of objects and pictorial models, including number lines | (vi) represent equivalent fractions with denominators of 2 using pictorial models, including number lines | | |
| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (F) represent equivalent fractions with denominators of 2, 3, 4, 6, and 8 using a variety of objects and pictorial models, including number lines | (vii) represent equivalent fractions with denominators of 3 using pictorial models, including number lines | | |
| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (F) represent equivalent fractions with denominators of 2, 3, 4, 6, and 8 using a variety of objects and pictorial models, including number lines | (viii) represent equivalent fractions with denominators of 4 using pictorial models, including number lines | | |
| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (F) represent equivalent fractions with denominators of 2, 3, 4, 6, and 8 using a variety of objects and pictorial models, including number lines | (ix) represent equivalent fractions with denominators of 6 using pictorial models, including number lines | | |

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| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (F) represent equivalent fractions with denominators of 2, 3, 4, 6, and 8 using a variety of objects and pictorial models, including number lines | (x) represent equivalent fractions with denominators of 8 using pictorial models, including number lines | | |
| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (G) explain that two fractions are equivalent if and only if they are both represented by the same point on the number line or represent the same portion of a same size whole for an area model | | | |
| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (H) compare two fractions having the same numerator or denominator in problems by reasoning about their sizes and justifying the conclusion using symbols, words, objects, and pictorial models | (i) compare two fractions having the same numerator or denominator in problems by reasoning about their sizes and justifying the conclusion using symbols | | |
| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (H) compare two fractions having the same numerator or denominator in problems by reasoning about their sizes and justifying the conclusion using symbols, words, objects, and pictorial models | (ii) compare two fractions having the same numerator or denominator in problems by reasoning about their sizes and justifying the conclusion using words | | |
| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (H) compare two fractions having the same numerator or denominator in problems by reasoning about their sizes and justifying the conclusion using symbols, words, objects, and pictorial models | (iii) compare two fractions having the same numerator or denominator in problems by reasoning about their sizes and justifying the conclusion using objects | | |

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| (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | (H) compare two fractions having the same numerator or denominator in problems by reasoning about their sizes and justifying the conclusion using symbols, words, objects, and pictorial models | (iv) compare two fractions having the same numerator or denominator in problems by reasoning about their sizes and justifying the conclusion using pictorial models | | |
| (4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve problems with efficiency and accuracy. The student is expected to: | (A) solve with fluency one-step and two-step problems involving addition and subtraction within 1,000 using strategies based on place value, properties of operations, and the relationship between addition and subtraction | (i) solve with fluency one-step problems involving addition within 1,000 using strategies based on place value | | |
| (4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve problems with efficiency and accuracy. The student is expected to: | (A) solve with fluency one-step and two-step problems involving addition and subtraction within 1,000 using strategies based on place value, properties of operations, and the relationship between addition and subtraction | (ii) solve with fluency one-step problems involving addition within 1,000 using strategies based properties of operations | | |
| (4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve problems with efficiency and accuracy. The student is expected to: | (A) solve with fluency one-step and two-step problems involving addition and subtraction within 1,000 using strategies based on place value, properties of operations, and the relationship between addition and subtraction | (iii) solve with fluency one-step problems involving addition within 1,000 using strategies based on the relationship between addition and subtraction | | |

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| (4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve problems with efficiency and accuracy. The student is expected to: | (A) solve with fluency one-step and two-step problems involving addition and subtraction within 1,000 using strategies based on place value, properties of operations, and the relationship between addition and subtraction | (iv) solve with fluency one-step problems involving subtraction within 1,000 using strategies based on place value | | |
| (4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve problems with efficiency and accuracy. The student is expected to: | (A) solve with fluency one-step and two-step problems involving addition and subtraction within 1,000 using strategies based on place value, properties of operations, and the relationship between addition and subtraction | (v) solve with fluency one-step problems involving subtraction within 1,000 using strategies based on properties of operations | | |
| (4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve problems with efficiency and accuracy. The student is expected to: | (A) solve with fluency one-step and two-step problems involving addition and subtraction within 1,000 using strategies based on place value, properties of operations, and the relationship between addition and subtraction | (vi) solve with fluency one-step problems involving subtraction within 1,000 using strategies based on the relationship between addition and subtraction | | |
| (4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve problems with efficiency and accuracy. The student is expected to: | (A) solve with fluency one-step and two-step problems involving addition and subtraction within 1,000 using strategies based on place value, properties of operations, and the relationship between addition and subtraction | (vii) solve with fluency two-step problems involving addition within 1,000 using strategies based on place value | | |

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| (4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve problems with efficiency and accuracy. The student is expected to: | (A) solve with fluency one-step and two-step problems involving addition and subtraction within 1,000 using strategies based on place value, properties of operations, and the relationship between addition and subtraction | (viii) solve with fluency two-step problems involving addition within 1,000 using strategies based on properties of operations | | |
| (4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve problems with efficiency and accuracy. The student is expected to: | (A) solve with fluency one-step and two-step problems involving addition and subtraction within 1,000 using strategies based on place value, properties of operations, and the relationship between addition and subtraction | (ix) solve with fluency two-step problems involving addition within 1,000 using strategies based on the relationship between addition and subtraction | | |
| (4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve problems with efficiency and accuracy. The student is expected to: | (A) solve with fluency one-step and two-step problems involving addition and subtraction within 1,000 using strategies based on place value, properties of operations, and the relationship between addition and subtraction | (x) solve with fluency two-step problems involving subtraction within 1,000 using strategies based on place value | | |
| (4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve problems with efficiency and accuracy. The student is expected to: | (A) solve with fluency one-step and two-step problems involving addition and subtraction within 1,000 using strategies based on place value, properties of operations, and the relationship between addition and subtraction | (xi) solve with fluency two-step problems involving subtraction within 1,000 using strategies based on properties of operations | | |

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| (4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve problems with efficiency and accuracy. The student is expected to: | (A) solve with fluency one-step and two-step problems involving addition and subtraction within 1,000 using strategies based on place value, properties of operations, and the relationship between addition and subtraction | (xii) solve with fluency two-step problems involving subtraction within 1,000 using strategies based on the relationship between addition and subtraction | | |
| (4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve problems with efficiency and accuracy. The student is expected to: | (A) solve with fluency one-step and two-step problems involving addition and subtraction within 1,000 using strategies based on place value, properties of operations, and the relationship between addition and subtraction | (xiii) solve with fluency two-step problems involving addition and subtraction within 1,000 using strategies based on place value | | |
| (4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve problems with efficiency and accuracy. The student is expected to: | (A) solve with fluency one-step and two-step problems involving addition and subtraction within 1,000 using strategies based on place value, properties of operations, and the relationship between addition and subtraction | (xiv) solve with fluency two-step problems involving addition and subtraction within 1,000 using strategies based on properties of operations | | |
| (4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve problems with efficiency and accuracy. The student is expected to: | (A) solve with fluency one-step and two-step problems involving addition and subtraction within 1,000 using strategies based on place value, properties of operations, and the relationship between addition and subtraction | (xv) solve with fluency two-step problems involving addition and subtraction within 1,000 using strategies based on the relationship between addition and subtraction | | |

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| (4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve problems with efficiency and accuracy. The student is expected to: | (B) round to the nearest 10 or 100 or use compatible numbers to estimate solutions to addition and subtraction problems | (i) round to the nearest 10 or 100 or use compatible numbers to estimate solutions to addition problems | | |
| (4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve problems with efficiency and accuracy. The student is expected to: | (B) round to the nearest 10 or 100 or use compatible numbers to estimate solutions to addition and subtraction problems | (ii) round to the nearest 10 or 100 or use compatible numbers to estimate solutions to subtraction problems | | |
| (4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve problems with efficiency and accuracy. The student is expected to: | (C) determine the value of a collection of coins and bills | (i) determine the value of a collection of coins | | |
| (4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve problems with efficiency and accuracy. The student is expected to: | (C) determine the value of a collection of coins and bills | (ii) determine the value of a collection of bills | | |

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| (4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve problems with efficiency and accuracy. The student is expected to: | (C) determine the value of a collection of coins and bills | (iii) determine the value of a collection of coins and bills | | |
| (4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve problems with efficiency and accuracy. The student is expected to: | (D) determine the total number of objects when equally-sized groups of objects are combined or arranged in arrays up to 10 by 10 | | | |
| (4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve problems with efficiency and accuracy. The student is expected to: | (E) represent multiplication facts by using a variety of approaches such as repeated addition, equal-sized groups, arrays, area models, equal jumps on a number line, and skip counting | (i) represent multiplication facts by using a variety of approaches | | |
| (4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve problems with efficiency and accuracy. The student is expected to: | (F) recall facts to multiply up to 10 by 10 with automaticity and recall the corresponding division facts | (i) recall facts to multiply up to 10 by 10 with automaticity | | |

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| (4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve problems with efficiency and accuracy. The student is expected to: | (F) recall facts to multiply up to 10 by 10 with automaticity and recall the corresponding division facts | (ii) recall the corresponding division facts | | |
| (4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve problems with efficiency and accuracy. The student is expected to: | (G) use strategies and algorithms, including the standard algorithm, to multiply a two-digit number by a one-digit number. Strategies may include mental math, partial products, and the commutative, associative, and distributive properties | (i) use strategies to multiply a two-digit number by a one-digit number | | |
| (4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve problems with efficiency and accuracy. The student is expected to: | (G) use strategies and algorithms, including the standard algorithm, to multiply a two-digit number by a one-digit number. Strategies may include mental math, partial products, and the commutative, associative, and distributive properties | (ii) use algorithms, including the standard algorithm, to multiply a two-digit number by a one-digit number | | |
| (4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve problems with efficiency and accuracy. The student is expected to: | (H) determine the number of objects in each group when a set of objects is partitioned into equal shares or a set of objects is shared equally | | | |

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| (4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve problems with efficiency and accuracy. The student is expected to: | (I) determine if a number is even or odd using divisibility rules | | | |
| (4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve problems with efficiency and accuracy. The student is expected to: | (J) determine a quotient using the relationship between multiplication and division | | | |
| (4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve problems with efficiency and accuracy. The student is expected to: | (K) solve one-step and two-step problems involving multiplication and division within 100 using strategies based on objects; pictorial models, including arrays, area models, and equal groups; properties of operations; or recall of facts | (i) solve one-step problems involving multiplication within 100 using strategies based on objects; pictorial models, including arrays, area models, and equal groups; properties of operations; or recall of facts | | |
| (4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve problems with efficiency and accuracy. The student is expected to: | (K) solve one-step and two-step problems involving multiplication and division within 100 using strategies based on objects; pictorial models, including arrays, area models, and equal groups; properties of operations; or recall of facts | (ii) solve one-step problems involving division within 100 using strategies based on objects; pictorial models, including arrays, area models, and equal groups; properties of operations; or recall of facts | | |

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| (4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve problems with efficiency and accuracy. The student is expected to: | (K) solve one-step and two-step problems involving multiplication and division within 100 using strategies based on objects; pictorial models, including arrays, area models, and equal groups; properties of operations; or recall of facts | (iii) solve two-step problems involving multiplication within 100 using strategies based on objects; pictorial models, including arrays, area models, and equal groups; properties of operations; or recall of facts | | |
| (4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve problems with efficiency and accuracy. The student is expected to: | (K) solve one-step and two-step problems involving multiplication and division within 100 using strategies based on objects; pictorial models, including arrays, area models, and equal groups; properties of operations; or recall of facts | (iv) solve two-step problems involving division within 100 using strategies based on objects; pictorial models, including arrays, area models, and equal groups; properties of operations; or recall of facts | | |
| (4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve problems with efficiency and accuracy. The student is expected to: | (K) solve one-step and two-step problems involving multiplication and division within 100 using strategies based on objects; pictorial models, including arrays, area models, and equal groups; properties of operations; or recall of facts | (v) solve two-step problems involving multiplication and division within 100 using strategies based on objects; pictorial models, including arrays, area models, and equal groups; properties of operations; or recall of facts | | |
| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (A) represent one- and two-step problems involving addition and subtraction of whole numbers to 1,000 using pictorial models, number lines, and equations | (i) represent one-step problems involving addition of whole numbers to 1,000 using pictorial models | | |

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| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (A) represent one- and two-step problems involving addition and subtraction of whole numbers to 1,000 using pictorial models, number lines, and equations | (ii) represent one-step problems involving addition of whole numbers to 1,000 using number lines | | |
| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (A) represent one- and two-step problems involving addition and subtraction of whole numbers to 1,000 using pictorial models, number lines, and equations | (iii) represent one-step problems involving addition of whole numbers to 1,000 using equations | | |
| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (A) represent one- and two-step problems involving addition and subtraction of whole numbers to 1,000 using pictorial models, number lines, and equations | (iv) represent one-step problems involving subtraction of whole numbers to 1,000 using pictorial models | | |
| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (A) represent one- and two-step problems involving addition and subtraction of whole numbers to 1,000 using pictorial models, number lines, and equations | (v) represent one-step problems involving subtraction of whole numbers to 1,000 using number lines | | |
| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (A) represent one- and two-step problems involving addition and subtraction of whole numbers to 1,000 using pictorial models, number lines, and equations | (vi) represent one-step problems involving subtraction of whole numbers to 1,000 using equations | | |
| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (A) represent one- and two-step problems involving addition and subtraction of whole numbers to 1,000 using pictorial models, number lines, and equations | (vii) represent two-step problems involving addition of whole numbers to 1,000 using pictorial models | | |

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| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (A) represent one- and two-step problems involving addition and subtraction of whole numbers to 1,000 using pictorial models, number lines, and equations | (viii) represent two-step problems involving addition of whole numbers to 1,000 using number lines | | |
| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (A) represent one- and two-step problems involving addition and subtraction of whole numbers to 1,000 using pictorial models, number lines, and equations | (ix) represent two-step problems involving addition of whole numbers to 1,000 using equations | | |
| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (A) represent one- and two-step problems involving addition and subtraction of whole numbers to 1,000 using pictorial models, number lines, and equations | (x) represent two-step problems involving subtraction of whole numbers to 1,000 using pictorial models | | |
| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (A) represent one- and two-step problems involving addition and subtraction of whole numbers to 1,000 using pictorial models, number lines, and equations | (xi) represent two-step problems involving subtraction of whole numbers to 1,000 using number lines | | |
| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (A) represent one- and two-step problems involving addition and subtraction of whole numbers to 1,000 using pictorial models, number lines, and equations | (xii) represent two-step problems involving subtraction of whole numbers to 1,000 using equations | | |
| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (A) represent one- and two-step problems involving addition and subtraction of whole numbers to 1,000 using pictorial models, number lines, and equations | (xiii) represent two-step problems involving addition and subtraction of whole numbers to 1,000 using pictorial models | | |

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| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (A) represent one- and two-step problems involving addition and subtraction of whole numbers to 1,000 using pictorial models, number lines, and equations | (xiv) represent two-step problems involving addition and subtraction of whole numbers to 1,000 using number lines | | |
| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (A) represent one- and two-step problems involving addition and subtraction of whole numbers to 1,000 using pictorial models, number lines, and equations | (xv) represent two-step problems involving addition and subtraction of whole numbers to 1,000 using equations | | |
| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (B) represent and solve one- and two-step multiplication and division problems within 100 using arrays, strip diagrams, and equations | (i) represent one-step multiplication problems within 100 using arrays | | |
| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (B) represent and solve one- and two-step multiplication and division problems within 100 using arrays, strip diagrams, and equations | (ii) represent one-step multiplication problems within 100 using strip diagrams | | |
| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (B) represent and solve one- and two-step multiplication and division problems within 100 using arrays, strip diagrams, and equations | (iii) represent one-step multiplication problems within 100 using equations | | |
| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (B) represent and solve one- and two-step multiplication and division problems within 100 using arrays, strip diagrams, and equations | (iv) represent one-step division problems within 100 using arrays | | |

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| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (B) represent and solve one- and two-step multiplication and division problems within 100 using arrays, strip diagrams, and equations | (v) represent one-step division problems within 100 using strip diagrams | | |
| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (B) represent and solve one- and two-step multiplication and division problems within 100 using arrays, strip diagrams, and equations | (vi) represent one-step division problems within 100 using equations | | |
| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (B) represent and solve one- and two-step multiplication and division problems within 100 using arrays, strip diagrams, and equations | (vii) represent two-step multiplication problems within 100 using arrays | | |
| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (B) represent and solve one- and two-step multiplication and division problems within 100 using arrays, strip diagrams, and equations | (viii) represent two-step multiplication problems within 100 using strip diagrams | | |
| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (B) represent and solve one- and two-step multiplication and division problems within 100 using arrays, strip diagrams, and equations | (ix) represent two-step multiplication problems within 100 using equations | | |
| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (B) represent and solve one- and two-step multiplication and division problems within 100 using arrays, strip diagrams, and equations | (x) represent two-step division problems within 100 using arrays | | |

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| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (B) represent and solve one- and two-step multiplication and division problems within 100 using arrays, strip diagrams, and equations | (xi) represent two-step division problems within 100 using strip diagrams | | |
| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (B) represent and solve one- and two-step multiplication and division problems within 100 using arrays, strip diagrams, and equations | (xii) represent two-step division problems within 100 using equations | | |
| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (B) represent and solve one- and two-step multiplication and division problems within 100 using arrays, strip diagrams, and equations | (xiii) solve one-step multiplication problems within 100 using arrays | | |
| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (B) represent and solve one- and two-step multiplication and division problems within 100 using arrays, strip diagrams, and equations | (xiv) solve one-step multiplication problems within 100 using strip diagrams | | |
| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (B) represent and solve one- and two-step multiplication and division problems within 100 using arrays, strip diagrams, and equations | (xv) solve one-step multiplication problems within 100 using equations | | |
| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (B) represent and solve one- and two-step multiplication and division problems within 100 using arrays, strip diagrams, and equations | (xvi) solve one-step division problems within 100 using arrays | | |

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| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (B) represent and solve one- and two-step multiplication and division problems within 100 using arrays, strip diagrams, and equations | (xvii) solve one-step division problems within 100 using strip diagrams | | |
| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (B) represent and solve one- and two-step multiplication and division problems within 100 using arrays, strip diagrams, and equations | (xviii) solve one-step division problems within 100 using equations | | |
| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (B) represent and solve one- and two-step multiplication and division problems within 100 using arrays, strip diagrams, and equations | (xix) solve two-step multiplication problems within 100 using arrays | | |
| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (B) represent and solve one- and two-step multiplication and division problems within 100 using arrays, strip diagrams, and equations | (xx) solve two-step multiplication problems within 100 using strip diagrams | | |
| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (B) represent and solve one- and two-step multiplication and division problems within 100 using arrays, strip diagrams, and equations | (xxi) solve two-step multiplication problems within 100 using equations | | |
| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (B) represent and solve one- and two-step multiplication and division problems within 100 using arrays, strip diagrams, and equations | (xxii) solve two-step division problems within 100 using arrays | | |

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| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (B) represent and solve one- and two-step multiplication and division problems within 100 using arrays, strip diagrams, and equations | (xxiii) solve two-step division problems within 100 using strip diagrams | | |
| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (B) represent and solve one- and two-step multiplication and division problems within 100 using arrays, strip diagrams, and equations | (xxiv) solve two-step division problems within 100 using equations | | |
| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (C) describe a multiplication expression as a comparison such as 3 x 24 represents 3 times as much as 24 | (i) describe a multiplication expression as a comparison | | |
| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (D) determine the unknown whole number in a multiplication or division equation relating three whole numbers when the unknown is either a missing factor or product | | | |
| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (E) represent real-world relationships using number pairs in a table and verbal descriptions | (i) represent real-world relationships using number pairs in a table | | |
| (5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to: | (E) represent real-world relationships using number pairs in a table and verbal descriptions | (ii) represent real-world relationships using verbal descriptions | | |

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| (6) Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional geometric figures to develop generalizations about their properties. The student is expected to: | (A) classify and sort two- and three-dimensional solids, including cones, cylinders, spheres, triangular and rectangular prisms, and cubes, based on attributes using formal geometric language | (i) classify two-dimensional solids based on attributes using formal geometric language | | |
| (6) Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional geometric figures to develop generalizations about their properties. The student is expected to: | (A) classify and sort two- and three-dimensional solids, including cones, cylinders, spheres, triangular and rectangular prisms, and cubes, based on attributes using formal geometric language | (ii) classify three-dimensional solids, including cones, based on attributes using formal geometric language | | |
| (6) Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional geometric figures to develop generalizations about their properties. The student is expected to: | (A) classify and sort two- and three-dimensional solids, including cones, cylinders, spheres, triangular and rectangular prisms, and cubes, based on attributes using formal geometric language | (iii) classify three-dimensional solids, including cylinders, based on attributes using formal geometric language | | |
| (6) Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional geometric figures to develop generalizations about their properties. The student is expected to: | (A) classify and sort two- and three-dimensional solids, including cones, cylinders, spheres, triangular and rectangular prisms, and cubes, based on attributes using formal geometric language | (iv) classify three-dimensional solids, including spheres, based on attributes using formal geometric language | | |

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| (6) Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional geometric figures to develop generalizations about their properties. The student is expected to: | (A) classify and sort two- and three-dimensional solids, including cones, cylinders, spheres, triangular and rectangular prisms, and cubes, based on attributes using formal geometric language | (v) classify three-dimensional solids, including triangular prisms, based on attributes using formal geometric language | | |
| (6) Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional geometric figures to develop generalizations about their properties. The student is expected to: | (A) classify and sort two- and three-dimensional solids, including cones, cylinders, spheres, triangular and rectangular prisms, and cubes, based on attributes using formal geometric language | (vi) classify three-dimensional solids, including rectangular prisms, based on attributes using formal geometric language | | |
| (6) Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional geometric figures to develop generalizations about their properties. The student is expected to: | (A) classify and sort two- and three-dimensional solids, including cones, cylinders, spheres, triangular and rectangular prisms, and cubes, based on attributes using formal geometric language | (vii) classify three-dimensional solids, including cubes, based on attributes using formal geometric language | | |
| (6) Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional geometric figures to develop generalizations about their properties. The student is expected to: | (A) classify and sort two- and three-dimensional solids, including cones, cylinders, spheres, triangular and rectangular prisms, and cubes, based on attributes using formal geometric language | (viii) sort two-dimensional solids based on attributes using formal geometric language | | |

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| (6) Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional geometric figures to develop generalizations about their properties. The student is expected to: | (A) classify and sort two- and three-dimensional solids, including cones, cylinders, spheres, triangular and rectangular prisms, and cubes, based on attributes using formal geometric language | (ix) sort three-dimensional solids, including cones, based on attributes using formal geometric language | | |
| (6) Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional geometric figures to develop generalizations about their properties. The student is expected to: | (A) classify and sort two- and three-dimensional solids, including cones, cylinders, spheres, triangular and rectangular prisms, and cubes, based on attributes using formal geometric language | (x) sort three-dimensional solids, including cylinders, based on attributes using formal geometric language | | |
| (6) Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional geometric figures to develop generalizations about their properties. The student is expected to: | (A) classify and sort two- and three-dimensional solids, including cones, cylinders, spheres, triangular and rectangular prisms, and cubes, based on attributes using formal geometric language | (xi) sort three-dimensional solids, including spheres, based on attributes using formal geometric language | | |
| (6) Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional geometric figures to develop generalizations about their properties. The student is expected to: | (A) classify and sort two- and three-dimensional solids, including cones, cylinders, spheres, triangular and rectangular prisms, and cubes, based on attributes using formal geometric language | (xii) sort three-dimensional solids, including triangular prisms, based on attributes using formal geometric language | | |

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| (6) Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional geometric figures to develop generalizations about their properties. The student is expected to: | (A) classify and sort two- and three-dimensional solids, including cones, cylinders, spheres, triangular and rectangular prisms, and cubes, based on attributes using formal geometric language | (xiii) sort three-dimensional solids, including rectangular prisms, based on attributes using formal geometric language | | |
| (6) Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional geometric figures to develop generalizations about their properties. The student is expected to: | (A) classify and sort two- and three-dimensional solids, including cones, cylinders, spheres, triangular and rectangular prisms, and cubes, based on attributes using formal geometric language | (xiv) sort three-dimensional solids, including cubes, based on attributes using formal geometric language | | |
| (6) Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional geometric figures to develop generalizations about their properties. The student is expected to: | (B) use attributes to recognize rhombuses, parallelograms, trapezoids, rectangles, and squares as examples of quadrilaterals and draw examples of quadrilaterals that do not belong to any of these subcategories | (i) use attributes to recognize rhombuses as examples of quadrilaterals | | |
| (6) Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional geometric figures to develop generalizations about their properties. The student is expected to: | (B) use attributes to recognize rhombuses, parallelograms, trapezoids, rectangles, and squares as examples of quadrilaterals and draw examples of quadrilaterals that do not belong to any of these subcategories | (ii) use attributes to recognize parallelograms as examples of quadrilaterals | | |

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| (6) Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional geometric figures to develop generalizations about their properties. The student is expected to: | (B) use attributes to recognize rhombuses, parallelograms, trapezoids, rectangles, and squares as examples of quadrilaterals and draw examples of quadrilaterals that do not belong to any of these subcategories | (iii) use attributes to recognize trapezoids as examples of quadrilaterals | | |
| (6) Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional geometric figures to develop generalizations about their properties. The student is expected to: | (B) use attributes to recognize rhombuses, parallelograms, trapezoids, rectangles, and squares as examples of quadrilaterals and draw examples of quadrilaterals that do not belong to any of these subcategories | (iv) use attributes to recognize rectangles as examples of quadrilaterals | | |
| (6) Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional geometric figures to develop generalizations about their properties. The student is expected to: | (B) use attributes to recognize rhombuses, parallelograms, trapezoids, rectangles, and squares as examples of quadrilaterals and draw examples of quadrilaterals that do not belong to any of these subcategories | (v) use attributes to recognize squares as examples of quadrilaterals | | |
| (6) Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional geometric figures to develop generalizations about their properties. The student is expected to: | (B) use attributes to recognize rhombuses, parallelograms, trapezoids, rectangles, and squares as examples of quadrilaterals and draw examples of quadrilaterals that do not belong to any of these subcategories | (vi) draw examples of quadrilaterals that do not belong to any of these subcategories | | |

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| (6) Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional geometric figures to develop generalizations about their properties. The student is expected to: | (C) determine the area of rectangles with whole number side lengths in problems using multiplication related to the number of rows times the number of unit squares in each row | | | |
| (6) Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional geometric figures to develop generalizations about their properties. The student is expected to: | (D) decompose composite figures formed by rectangles into non-overlapping rectangles to determine the area of the original figure using the additive property of area | | | |
| (6) Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional geometric figures to develop generalizations about their properties. The student is expected to: | (E) decompose two congruent two-dimensional figures into parts with equal areas and express the area of each part as a unit fraction of the whole and recognize that equal shares of identical wholes need not have the same shape | (i) decompose two congruent two-dimensional figures into parts with equal areas | | |
| (6) Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional geometric figures to develop generalizations about their properties. The student is expected to: | (E) decompose two congruent two-dimensional figures into parts with equal areas and express the area of each part as a unit fraction of the whole and recognize that equal shares of identical wholes need not have the same shape | (ii) express the area of each part as a unit fraction of the whole | | |

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| (6) Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional geometric figures to develop generalizations about their properties. The student is expected to: | (E) decompose two congruent two-dimensional figures into parts with equal areas and express the area of each part as a unit fraction of the whole and recognize that equal shares of identical wholes need not have the same shape | (iii) recognize that equal shares of identical wholes need not have the same shape | | |
| (7) Geometry and measurement. The student applies mathematical process standards to select appropriate units, strategies, and tools to solve problems involving customary and metric measurement. The student is expected to: | (A) represent fractions of halves, fourths, and eighths as distances from zero on a number line | (i) represent fractions of halves as distances from zero on a number line | | |
| (7) Geometry and measurement. The student applies mathematical process standards to select appropriate units, strategies, and tools to solve problems involving customary and metric measurement. The student is expected to: | (A) represent fractions of halves, fourths, and eighths as distances from zero on a number line | (ii) represent fractions of fourths as distances from zero on a number line | | |
| (7) Geometry and measurement. The student applies mathematical process standards to select appropriate units, strategies, and tools to solve problems involving customary and metric measurement. The student is expected to: | (A) represent fractions of halves, fourths, and eighths as distances from zero on a number line | (iii) represent fractions of eighths as distances from zero on a number line | | |

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| (7) Geometry and measurement. The student applies mathematical process standards to select appropriate units, strategies, and tools to solve problems involving customary and metric measurement. The student is expected to: | (B) determine the perimeter of a polygon or a missing length when given perimeter and remaining side lengths in problems | | | |
| (7) Geometry and measurement. The student applies mathematical process standards to select appropriate units, strategies, and tools to solve problems involving customary and metric measurement. The student is expected to: | (C) determine the solutions to problems involving addition and subtraction of time intervals in minutes using pictorial models or tools such as a 15-minute event plus a 30-minute event equals 45 minutes | (i) determine the solutions to problems involving addition of time intervals in minutes using pictorial models or tools | | |
| (7) Geometry and measurement. The student applies mathematical process standards to select appropriate units, strategies, and tools to solve problems involving customary and metric measurement. The student is expected to: | (C) determine the solutions to problems involving addition and subtraction of time intervals in minutes using pictorial models or tools such as a 15-minute event plus a 30-minute event equals 45 minutes | (ii) determine the solutions to problems involving subtraction of time intervals in minutes using pictorial models or tools | | |
| (7) Geometry and measurement. The student applies mathematical process standards to select appropriate units, strategies, and tools to solve problems involving customary and metric measurement. The student is expected to: | (C) determine the solutions to problems involving addition and subtraction of time intervals in minutes using pictorial models or tools such as a 15-minute event plus a 30-minute event equals 45 minutes | (iii) determine the solutions to problems involving addition and subtraction of time intervals in minutes using pictorial models or tools | | |

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| (7) Geometry and measurement. The student applies mathematical process standards to select appropriate units, strategies, and tools to solve problems involving customary and metric measurement. The student is expected to: | (D) determine when it is appropriate to use measurements of liquid volume (capacity) or weight | | | |
| (7) Geometry and measurement. The student applies mathematical process standards to select appropriate units, strategies, and tools to solve problems involving customary and metric measurement. The student is expected to: | (E) determine liquid volume (capacity) or weight using appropriate units and tools | (i) determine liquid volume (capacity) or weight using appropriate units | | |
| (7) Geometry and measurement. The student applies mathematical process standards to select appropriate units, strategies, and tools to solve problems involving customary and metric measurement. The student is expected to: | (E) determine liquid volume (capacity) or weight using appropriate units and tools | (ii) determine liquid volume (capacity) or weight using appropriate tools | | |
| (8) Data analysis. The student applies mathematical process standards to solve problems by collecting, organizing, displaying, and interpreting data. The student is expected to: | (A) summarize a data set with multiple categories using a frequency table, dot plot, pictograph, or bar graph with scaled intervals | | | |

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| (8) Data analysis. The student applies mathematical process standards to solve problems by collecting, organizing, displaying, and interpreting data. The student is expected to: | (B) solve one- and two-step problems using categorical data represented with a frequency table, dot plot, pictograph, or bar graph with scaled intervals | (i) solve one-step problems using categorical data represented with a frequency table, dot plot, pictograph, or bar graph with scaled intervals | | |
| (8) Data analysis. The student applies mathematical process standards to solve problems by collecting, organizing, displaying, and interpreting data. The student is expected to: | (B) solve one- and two-step problems using categorical data represented with a frequency table, dot plot, pictograph, or bar graph with scaled intervals | (ii) solve two-step problems using categorical data represented with a frequency table, dot plot, pictograph, or bar graph with scaled intervals | | |
| (9) Personal financial literacy. The student applies mathematical process standards to manage one's financial resources effectively for lifetime financial security. The student is expected to: | (A) explain the connection between human capital/labor and income | | | |
| (9) Personal financial literacy. The student applies mathematical process standards to manage one's financial resources effectively for lifetime financial security. The student is expected to: | (B) describe the relationship between the availability or scarcity of resources and how that impacts cost | | | |

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| (9) Personal financial literacy. The student applies mathematical process standards to manage one's financial resources effectively for lifetime financial security. The student is expected to: | (C) identify the costs and benefits of planned and unplanned spending decisions | (i) identify the costs of planned spending decisions | | |
| (9) Personal financial literacy. The student applies mathematical process standards to manage one's financial resources effectively for lifetime financial security. The student is expected to: | (C) identify the costs and benefits of planned and unplanned spending decisions | (ii) identify the costs of unplanned spending decisions | | |
| (9) Personal financial literacy. The student applies mathematical process standards to manage one's financial resources effectively for lifetime financial security. The student is expected to: | (C) identify the costs and benefits of planned and unplanned spending decisions | (iii) identify the benefits of planned spending decisions | | |
| (9) Personal financial literacy. The student applies mathematical process standards to manage one's financial resources effectively for lifetime financial security. The student is expected to: | (C) identify the costs and benefits of planned and unplanned spending decisions | (iv) identify the benefits of unplanned spending decisions | | |

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| TEKS (Knowledge and Skills) | Student Expectation | Breakout | Element | Subelement |
| (9) Personal financial literacy. The student applies mathematical process standards to manage one's financial resources effectively for lifetime financial security. The student is expected to: | (D) explain that credit is used when wants or needs exceed the ability to pay and that it is the borrower's responsibility to pay it back to the lender, usually with interest | (i) explain that credit is used when wants or needs exceed the ability to pay | | |
| (9) Personal financial literacy. The student applies mathematical process standards to manage one's financial resources effectively for lifetime financial security. The student is expected to: | (D) explain that credit is used when wants or needs exceed the ability to pay and that it is the borrower's responsibility to pay it back to the lender, usually with interest | (ii) explain that it is the borrower's responsibility to pay it back to the lender, usually with interest | | |
| (9) Personal financial literacy. The student applies mathematical process standards to manage one's financial resources effectively for lifetime financial security. The student is expected to: | (E) list reasons to save and explain the benefit of a savings plan, including for college | (i) list reasons to save | | |
| (9) Personal financial literacy. The student applies mathematical process standards to manage one's financial resources effectively for lifetime financial security. The student is expected to: | (E) list reasons to save and explain the benefit of a savings plan, including for college | (ii) explain the benefit of a savings plan, including for college | | |

| Subject | Chapter 111. Mathematics | | | |
|---|---|---|---|---|
| Course Title | §111.5. Math, Grade 3, Beginning with School Year 2014-2015 | | | |
| TEKS (Knowledge and Skills) | Student Expectation | Breakout | Element | Subelement |
| (9) Personal financial literacy. The student applies mathematical process standards to manage one's financial resources effectively for lifetime financial security. The student is expected to: | (F) identify decisions involving income, spending, saving, credit, and charitable giving | (i) identify decisions involving income | | |
| (9) Personal financial literacy. The student applies mathematical process standards to manage one's financial resources effectively for lifetime financial security. The student is expected to: | (F) identify decisions involving income, spending, saving, credit, and charitable giving | (ii) identify decisions involving spending | | |
| (9) Personal financial literacy. The student applies mathematical process standards to manage one's financial resources effectively for lifetime financial security. The student is expected to: | (F) identify decisions involving income, spending, saving, credit, and charitable giving | (iii) identify decisions involving saving | | |
| (9) Personal financial literacy. The student applies mathematical process standards to manage one's financial resources effectively for lifetime financial security. The student is expected to: | (F) identify decisions involving income, spending, saving, credit, and charitable giving | (iv) identify decisions involving credit | | |

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|---|---|---|---|---|
| **Subject** | **Chapter 111. Mathematics** | | | |
| **Course Title** | **§111.5. Math, Grade 3, Beginning with School Year 2014-2015** | | | |
| **TEKS (Knowledge and Skills)** | **Student Expectation** | **Breakout** | **Element** | **Subelement** |
| (9) Personal financial literacy. The student applies mathematical process standards to manage one's financial resources effectively for lifetime financial security. The student is expected to: | (F) identify decisions involving income, spending, saving, credit, and charitable giving | (v) identify decisions involving charitable giving | | |