

Fourth Grade Benchmarks Mathematics

Level 5 – Student performance exceeds year-end standard

Level 4 – Student performance meets year-end standard

Level 3 – Student performance approaches year-end standard

Level 2 – Student demonstrates limited performance to year-end standard

Level 1 – Student does not yet evidence understanding or application of skills related to year-end standard

NOTE: MPI and MPII performance levels are determined based on performance expectations at the time of reporting

Student Performance Standard	Level 1	Level 2	Level 3	Level 4	Level 5
<i>Operations and Algebraic Thinking:</i>					
Solve multi-step word problems with whole numbers using all four operations.	Solves word problems with guidance; evidences limited use of mental computation and estimation strategies.	Solves scaffolded word problems using some operations; does not recognize errors; evidences limited use of mental computation and estimation strategies.	Solves word problems using most operations, including problems with remainders, with few errors; self-corrects most errors; represents some problems with equations and variables; assesses the reasonableness of some responses based on mental computation and estimation strategies.	Consistently solves word problems using all four operations, including problems with remainders, with no errors; consistently represents problems with equations and variables; consistently assesses the reasonableness of responses based on mental computation and estimation strategies.	In addition to Level 4 performance, able to apply all four operations to novel situations; creates, models, and explains original problems involving all four operations based on given variables.
Find factor pairs for whole numbers.	Finds factor pairs for whole numbers with guidance; limited knowledge of multiplication facts impacts ability to find factor pairs.	Finds some factor pairs for a whole number in the range of 1 to 100; evidences limited understanding that a whole number is a multiple of each of its factors; limited knowledge of multiplication facts impacts ability to find factor pairs.	Finds most factor pairs for a whole number in the range of 1 to 100; evidences some understanding that a whole number is a multiple of each of its factors; determines whether specific numbers are prime or composite.	Consistently finds all factor pairs for a whole number in the range of 1 to 100; evidences understanding that a whole number is a multiple of each of its factors; consistently determines whether a number is prime or composite.	In addition to Level 4 performance, models and explains factor pairs for a whole number in the range of 1 to 100; supports peers in developing explanations of why a number is prime or composite.

<i>Numbers and Operations in Base Ten:</i>					
Fluently add and subtract multi-digit whole numbers.	Adds and subtracts with guidance.	Adds and subtracts multi-digit whole numbers with scaffolding; does not yet evidence competent skills with either operation.	Adds and subtracts multi-digit whole numbers; speed and/or accuracy are not yet at a fluent level.	Fluently (quickly and accurately) adds and subtracts multi-digit whole numbers.	In addition to Level 4 performance, models and explains multi-digit addition and subtraction of whole numbers for peers.
Round multi-digit whole numbers to any given place.	Rounds whole numbers with guidance; evidences limited understanding of place value.	Rounds some multi-digit numbers to a given place; does not recognize most errors; evidences limited understanding of place value.	Rounds some multi-digit whole numbers to any given place with few errors based on place value understanding; self-corrects most errors.	Consistently rounds multi-digit whole numbers to any given place with no errors based on place value understanding.	In addition to Level 4 performance, models and explains rounding of multi-digit whole numbers for peers.
Multiply four-digit by one-digit numbers.	Multiplies numbers with guidance; limited knowledge of multiplication facts impacts ability to multiply.	Inconsistently multiplies up to four digits by one digit; does not recognize errors; limited knowledge of multiplication facts impacts ability to multiply.	Multiplies up to four digits by one digit with few errors using some strategies based on place value and properties of operations; self-corrects most errors.	Consistently multiplies up to four digits by one digit with no errors using strategies based on place value and properties of operations.	In addition to Level 4 performance, models and explains multiplication of up to four digits by one digit for peers.
Multiply two-digit by two-digit numbers.	Multiplies numbers with guidance; limited knowledge of multiplication facts impacts ability to multiply	Inconsistently multiplies two-digits by two-digits; does not recognize errors; limited knowledge of multiplication facts impacts ability to multiply.	Multiplies two-digits by two-digits with few errors using some strategies based on place value and properties of operations; self-corrects most errors.	Consistently multiplies two-digits by two-digits with no errors using strategies based on place value and properties of operations.	In addition to Level 4 performance, models and explains multiplication of two-digits by two-digits for peers.
Divide four-digit dividends by one-digit divisors.	Divides numbers with guidance; limited knowledge of division facts impacts ability to divide.	Inconsistently divides up to four digits by one digit; does not recognize errors; limited understanding of the relationship	Divides up to four-digit dividends by one-digit with few errors using some of the following strategies: place	Consistently divides up to four-digit dividends by one-digit with no errors using strategies based on place value,	In addition to Level 4 performance, models and explains division of up to four-digit dividends by one-digit for peers.

		between multiplication and division impacts ability to divide.	value, properties of operations, and the relationship between multiplication and division; self-corrects most errors.	properties of operations, and the relationship between multiplication and division.	
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<i>Number and Operations – Fractions:</i>					
Add and subtract fractions and mixed numbers with like denominators.	Adds and subtracts fractions and mixed numbers with guidance; evidences limited understanding of addition and subtraction of fractions as joining and separating parts of the same whole.	Adds and subtracts fractions and mixed numbers with multiple errors; does not recognize errors; evidences limited understanding of addition and subtraction of fractions as joining and separating parts of the same whole.	Adds and subtracts fractions and mixed numbers with like denominators with few errors; self-corrects most errors; evidences some understanding of addition and subtraction of fractions as joining and separating parts of the same whole.	Consistently adds and subtracts fractions and mixed numbers with like denominators with no errors; evidences understanding of addition and subtraction of fractions as joining and separating parts of the same whole.	In addition to Level 4 performance, models and explains addition and subtraction of fractions and mixed numbers with like denominators for peers.
Multiply a fraction by a whole number.	Multiplies fractions with guidance; limited understanding of the multiplication operation impacts ability to multiply fractions.	Inconsistently multiplies a fraction by a whole number; does not recognize errors; limited understanding of the multiplication operation impacts ability to multiply fractions.	Multiplies a fraction by a whole number with few errors; self-corrects most errors; applies and extends some previous understandings of multiplication to fractions.	Consistently multiplies a fraction by a whole number with no errors; applies and extends previous understandings of multiplication to fractions.	In addition to Level 4 performance, models and explains multiplication of a fraction by a whole number for peers.
Express fractions as decimals.	Expresses fractions as decimals with guidance.	Inconsistently expresses fractions as decimals; does not recognize errors.	Expresses most fractions as decimals with few errors; self-corrects most errors.	Consistently expresses fractions as decimals with no errors.	In addition to Level 4 performance, models and explains expression of a fraction as a decimal for peers.

<i>Measurement and Data:</i>					
Use the four operations to solve problems.	Solves problems involving money, distance, time intervals, volume, and mass with guidance; limited understanding of operations impacts ability to solve problems.	Uses some of the four operations to solve problems involving money, distance, time intervals, volume, and mass; limited understanding of operations impacts ability to solve problems.	Uses the four operations to solve some problems with money and for distance, time intervals, volume and mass; represents some quantities using diagrams with measurement scales.	Consistently uses the four operations to solve problems with money and for distance, time intervals, volume and mass; consistently represents quantities using diagrams with measurement scales.	In addition to Level 4 performance, able to apply all four operations to novel situations involving money, distance, time intervals, and volume/mass; creates, models, and explains original problems based on given variables.
Solve problems for area and perimeter.	Solves problems for area and perimeter with guidance.	Inconsistently applies area and perimeter formulas; does not recognize errors.	Applies area and perimeter formulas for rectangles in real world problems with few errors; self-corrects most errors.	Consistently applies area and perimeter formulas for rectangles in real world problems with no errors.	In addition to Level 4 performance, models and explains application of area and perimeter formulas in novel problems for peers.
Display a data set of measurements.	Displays a data set of measurements with guidance.	Displays a data set of measurements in fractions of a unit with scaffolding; solves some problems using information presented in the data set or related line plots with scaffolding.	Displays a data set of measurements in fractions of a unit with some errors; solves some problems using information presented in the data set or related line plots.	Consistently displays a data set of measurements in fractions of a unit with no errors; solves problems using information presented in the data set or related line plots.	In addition to Level 4 performance, models and explains a data set of measurements in fractions of a unit for peers.
Measure angles.	Measures angles with guidance.	Inconsistently measures angles; sketches some angles of specific measure.	Measures angles in whole-number degrees using a protractor with some errors; sketches some angles of specific measure.	Consistently measures angles in whole-number degrees using a protractor; sketches angles of specific measure.	In addition to Level 4 performance, solves real world problems involving angles.

<i>Geometry:</i>					
Draw points, lines, and angles.	Draws points, lines, line segments, rays, angles, and perpendicular and parallel lines with guidance.	Draws some points, lines, line segments, rays, angles, and perpendicular and parallel lines; identifies some of these components of two-dimensional figures; does not recognize errors.	Draws points, lines, line segments, rays, angles, and perpendicular and parallel lines with few errors; identifies most of these components of two-dimensional figures; self-corrects most errors.	Consistently draws points, lines, line segments, rays, angles, and perpendicular and parallel lines with accuracy; consistently identifies these components of two-dimensional figures.	In addition to Level 3 performance, recognizes and identifies points, lines, line segments, rays, angles and perpendicular and parallel lines in the real world.
Recognize and draw lines of symmetry.	Recognizes and draws lines of symmetry with guidance.	Recognizes a line of symmetry for some two-dimensional figures; identifies some line-symmetric figures; draws lines of symmetry with scaffolding; does not recognize errors.	Recognizes a line of symmetry for most two-dimensional figures; identifies most line-symmetric figures; draws lines of symmetry with few errors; self-corrects most errors.	Consistently recognizes a line of symmetry for a two-dimensional figure; consistently identifies line-symmetric figures; consistently and accurately draws lines of symmetry.	In addition to Level 4 performance, models and explains lines of symmetry for peers.