



Achievement Level Descriptors (ALDs)

Mathematics

Grades 3-5

The achievement level descriptors describe what a typical student scoring at each achievement level can do. A student who scores at a level would be expected to also be able to demonstrate the skills described in previous levels. A student would not necessarily demonstrate all the skills listed at a particular achievement level on a particular test in order to score at that level.

Achievement Level Descriptors (ALDs)
Mathematics
Grade 3

	Far Below Proficient	Below Proficient	Proficient	Advanced
Overall for Reports – not specific to grade level or content	Student may partially meet the standards but has significant gaps in knowledge and skills of current grade-level content.	Student partially meets the standards and may have gaps in knowledge and skills but is capable of most grade-level content.	Student meets the standards at a proficient level, demonstrating knowledge and skills of current grade-level content.	Student meets the standards at an advanced level, demonstrating knowledge and skills of complex grade-level content.
Operations and Algebraic Thinking				
3.OA.1 3.OA.2 3.OA.3 3.OA.4 3.OA.5 3.OA.6 3.OA.7 3.OA.8 3.OA.9	<p>A student at this level</p> <ul style="list-style-type: none"> solves one-step word problems using addition and subtraction calculates sums and differences of whole numbers finds unknown terms in addition and subtraction equations 	<p>A student at this level</p> <ul style="list-style-type: none"> solves one-step problems using all four operations calculates whole-number products and quotients finds an unknown in a multiplication equation extends the terms of an arithmetic pattern 	<p>A student at this level</p> <ul style="list-style-type: none"> solves two-step word problems, using any of the four operations applies a property of operations to multiply and divide calculates and interprets whole-number products and quotients up to 100 fluently multiplies and divides up to 100 finds unknowns in multiplication and division equations involving three whole numbers identifies rules for arithmetic patterns 	<p>A student at this level</p> <ul style="list-style-type: none"> solves multistep word problems, using all four operations applies multiple properties of operations to multiply and divide calculates, interprets, and creates real-world problems involving whole-number products and quotients explains rules for arithmetic patterns

Number and Operations in Base Ten				
3.NBT.1 3.NBT.2 3.NBT.3	<p>A student at this level</p> <ul style="list-style-type: none"> identifies the place values of digits in the ones, tens, and hundreds places adds or subtracts whole numbers up to 100 	<p>A student at this level</p> <ul style="list-style-type: none"> identifies the place values of digits in the ones, tens, hundreds, and thousands places multiplies single-digit numbers adds and subtracts whole numbers up to 100 	<p>A student at this level</p> <ul style="list-style-type: none"> rounds whole numbers to the nearest 10 or 100 multiplies one-digit whole numbers by multiples of 10 adds and subtracts whole numbers fluently up to 1,000 by applying a variety of strategies 	<p>A student at this level</p> <ul style="list-style-type: none"> rounds three-digit whole numbers to the nearest 10 and rounds four-digit whole numbers to the nearest 100 multiplies one-digit whole numbers by multiples of 100 evaluates the most efficient strategies for solving a given addition/subtraction equation identifies errors in a solution strategy for a given addition/subtraction equation
Number and Operations—Fractions				
3.NF.1 3.NF.2 3.NF.3	<p>A student at this level</p> <ul style="list-style-type: none"> identifies fractional parts of one whole and recognizes unit fractions on a visual model 	<p>A student at this level</p> <ul style="list-style-type: none"> understands a unit fraction as an equal part of one whole and represents unit fractions on a number line compares fractions with the same denominator 	<p>A student at this level</p> <ul style="list-style-type: none"> understands fractions in terms of equal parts of one whole and intervals on a number line recognizes fractional equivalence supported by visual models compares fractions with the same numerator or the same denominator, using $<$, $>$, or $=$ 	<p>A student at this level</p> <ul style="list-style-type: none"> understands fractions, fractional equivalence, comparisons, unit fractions, and addition and subtraction of fractions in terms of equal partitions of one or more wholes and intervals on a number line recognizes mixed numbers as additive between a fraction and a whole number

Measurement and Data				
3.MD.1 3.MD.2 3.MD.3 3.MD.4 3.MD.5 3.MD.6 3.MD.7 3.MD.8 3.MD.9 3.MD.10	A student at this level <ul style="list-style-type: none"> tells and writes time to the nearest five minutes recognizes standard and metric units of volume, such as cups and liters interprets a unit-scaled pictograph graph or bar graph to represent data recognizes the side lengths of polygons 	A student at this level <ul style="list-style-type: none"> tells and writes time to the minute measures length to the nearest whole unit draws and interprets unit-scaled pictographs, bar graphs, and line plots finds perimeters given the side lengths of polygons 	A student at this level <ul style="list-style-type: none"> tells and writes time to the nearest minute and measures time intervals in minutes measures and estimates length to one-quarter of a unit measures liquid volume and mass draws and interprets scaled pictographs, bar graphs, and line plots solves problems related to perimeter (polygons), area (rectangles), and their relationships 	A student at this level <ul style="list-style-type: none"> solves time interval problems involving hours and minutes solves multistep problems involving interpreting scaled pictographs, bar graphs, and line plots recognizes patterns between area and perimeter
Geometry				
3.G.1 3.G.2	A student at this level <ul style="list-style-type: none"> partitions symmetrical shapes into halves recognizes quadrilaterals 	A student at this level <ul style="list-style-type: none"> identifies the fractions associated with shapes partitioned into equal areas recognizes that shapes fit into different categories 	A student at this level <ul style="list-style-type: none"> partitions shapes into equal areas and relates the areas to unit fractions recognizes that shapes fit into different categories and creates examples and non-examples 	A student at this level <ul style="list-style-type: none"> partitions shapes into equal areas in a variety of ways and relates the areas to fractional parts

Achievement Level Descriptors (ALDs)
Mathematics
Grade 4

	Far Below Proficient	Below Proficient	Proficient	Advanced
Overall for Reports – not specific to grade level or content	Student may partially meet the standards but has significant gaps in knowledge and skills of current grade-level content.	Student partially meets the standards and may have gaps in knowledge and skills but is capable of most grade-level content.	Student meets the standards at a proficient level, demonstrating knowledge and skills of current grade-level content.	Student meets the standards at an advanced level, demonstrating knowledge and skills of complex grade-level content.
Operations and Algebraic Thinking				
4.OA.1 4.OA.2 4.OA.3 4.OA.4 4.OA.5 4.OA.6	<p style="text-align: center;">A student at this level</p> <ul style="list-style-type: none"> solves single-step word problems by adding, subtracting, multiplying, and dividing finds all factor pairs to 24 	<p style="text-align: center;">A student at this level</p> <ul style="list-style-type: none"> solves single-step word problems by multiplying and dividing with whole-number factors, products, dividends, divisors, and quotients recognizes multiples of a given single-digit number finds all factor pairs to 48 identifies the next term in a number or shape pattern 	<p style="text-align: center;">A student at this level</p> <ul style="list-style-type: none"> interprets multiplication equations as comparisons and uses them to solve multistep word problems, using the four operations explains the correlations/differences between multiples and factors and identifies multiples of a given single-digit number finds factor pairs of whole numbers up to 100 generates number and shape patterns that follow a given rule, including rules expressed algebraically 	<p style="text-align: center;">A student at this level</p> <ul style="list-style-type: none"> interprets multiplication equations as comparisons and uses them to solve multistep word problems, using the four operations and an unknown quantity as a variable finds prime factors of a given number generates the rules for given number and shape patterns, including rules expressed algebraically

			<ul style="list-style-type: none"> determines whether a whole number up to 100 is prime or composite interprets remainders in context 	<ul style="list-style-type: none"> explains the difference between prime and composite numbers
Number and Operations in Base Ten				
4.NBT.1 4.NBT.2 4.NBT.3 4.NBT.4 4.NBT.5 4.NBT.6	A student at this level <ul style="list-style-type: none"> adds and subtracts with up to three-digit addends, subtrahends, and minuends 	A student at this level <ul style="list-style-type: none"> adds and subtracts multi-digit whole numbers finds whole-number quotients to two digits, using a whole-number dividend and divisor multiplies a two-digit whole number by a one-digit whole number 	A student at this level <ul style="list-style-type: none"> adds and subtracts fluently by applying a variety of strategies and verifies the reasonableness of results finds whole-number quotients to four digits, using a four-digit dividend and one-digit divisor multiplies a three- or four-digit whole number by a one-digit whole number multiplies two two-digit whole numbers represents place values by left and right positions as multiples or quotients of 10, 100, 1,000, or 10,000 	A student at this level <ul style="list-style-type: none"> identifies efficient strategies for adding or subtracting multi-digit whole numbers identifies and corrects errors in a given strategy for adding or subtracting multi-digit whole numbers

	<ul style="list-style-type: none"> uses place value to read and write numbers to 1,000 in standard form 	<ul style="list-style-type: none"> reads and writes numbers in standard form uses place value to round numbers to the greatest place value recognizes whole-number patterns in base ten 	<ul style="list-style-type: none"> reads and writes multi-digit numbers in standard form and expanded notation estimates and rounds numbers to specified place values illustrates and explains calculations when multiplying and dividing 	<ul style="list-style-type: none"> uses place value to explain and illustrate multiplication algorithms
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Number and Operations—Fractions

<p>4.NF.1 4.NF.2 4.NF.3 4.NF.4 4.NF.5 4.NF.6 4.NF.7</p>	<p>A student at this level</p> <ul style="list-style-type: none"> compares fractions with like denominators, using symbols identifies tenths, both as fractions and as decimals 	<p>A student at this level</p> <ul style="list-style-type: none"> compares fractions with like numerators or like denominators, using symbols identifies tenths and hundredths, both as fractions and as decimals, using visual models 	<p>A student at this level</p> <ul style="list-style-type: none"> understands and uses fraction equivalence compares fractions symbolically, using $<$, $>$, and $=$ expresses and represents equivalence between fractions with denominators of 10 and 100 identifies unit fractions that compose fractions with numerators > 1 	<p>A student at this level</p> <ul style="list-style-type: none"> understands, explains, and represents fraction equivalence orders more than two fractions represents and decomposes fractions as a sum of unit fractions
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		<ul style="list-style-type: none"> • adds or subtracts fractions with like denominators • solves word problems with addition or subtraction of fractions with like denominators 	<ul style="list-style-type: none"> • adds and subtracts fractions with like denominators • solves two-step word problems with addition and subtraction of fractions with like denominators • multiplies fractions by whole numbers • solves word problems with multiplication of fractions by whole numbers • finds equivalent fractions, using tenths and hundredths • compares and orders decimals to hundredths 	<ul style="list-style-type: none"> • adds and subtracts fractions and mixed numbers with like denominators • solves multistep word problems with addition and subtraction of fractions with like denominators • represents and explains multiplication of fractions by whole numbers • solves multistep word problems with multiplication of fractions by whole numbers • orders three or more decimals to hundredths from least to greatest or greatest to least
Measurement and Data				
4.MD.1 4.MD.2 4.MD.3 4.MD.4 4.MD.5 4.MD.6 4.MD.7 4.MD.8 4.MD.9	A student at this level <ul style="list-style-type: none"> • knows that converting a measurement from larger units to smaller units increases the number of units 	A student at this level <ul style="list-style-type: none"> • converts units of measurement, using multiplication 	A student at this level <ul style="list-style-type: none"> • solves one-step problems in measurement conversion, using the four operations with distance, time, liquid 	A student at this level <ul style="list-style-type: none"> • solves multistep problems in measurement conversion, using the four operations

	<ul style="list-style-type: none"> orders angles by size 	<ul style="list-style-type: none"> identifies data from line plots in fractional units solves addition and subtraction problems involving angles finds the areas and perimeters of rectangles 	<p>volume, mass, and money</p> <ul style="list-style-type: none"> draws line plots to represent data in fractions of a unit ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$) solves two-step problems involving interpretation of data on a line plot measures and draws angles and recognizes that angles are fractions of a circle that are measured in degrees solves addition and subtraction word problems involving angles finds the areas and perimeters of rectangles in real-world and mathematical problems 	<ul style="list-style-type: none"> draws line plots in fractions of a unit to represent data solves multistep problems involving interpretation of data on a line plot solves multistep addition and subtraction word problems involving angles
Geometry				
4.G.1 4.G.2 4.G.3	A student at this level <ul style="list-style-type: none"> draws points and line segments 	A student at this level <ul style="list-style-type: none"> draws points, lines, and angles and identifies them in two-dimensional figures 	A student at this level <ul style="list-style-type: none"> draws points, lines, line segments, rays, angles, and parallel and perpendicular lines and identifies them in two-dimensional figures 	A student at this level <ul style="list-style-type: none"> draws, defines, and interprets points, lines, line segments, rays, angles, and parallel and perpendicular lines and represents them in two-dimensional figures

	<ul style="list-style-type: none"> recognizes symmetrical and nonsymmetrical figures 	<ul style="list-style-type: none"> identifies a line of symmetry 	<ul style="list-style-type: none"> identifies right triangles identifies and draws lines of symmetry in two-dimensional figures classifies quadrilaterals based on the presence or absence of parallel or perpendicular lines 	<ul style="list-style-type: none"> identifies and generalizes right triangles interprets symmetry as a characteristic of two-dimensional figures provides examples of two-dimensional figures, given specific characteristics
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Achievement Level Descriptors (ALDs)
Mathematics
Grade 5

	Far Below Proficient	Below Proficient	Proficient	Advanced
Overall for Reports – not specific to grade level or content	Student may partially meet the standards but has significant gaps in knowledge and skills of current grade-level content.	Student partially meets the standards and may have gaps in knowledge and skills but is capable of most grade-level content.	Student meets the standards at a proficient level, demonstrating knowledge and skills of current grade-level content.	Student meets the standards at an advanced level, demonstrating knowledge and skills of complex grade-level content.
Operations and Algebraic Thinking				
5.OA.1 5.OA.2 5.OA.3	<p>A student at this level</p> <ul style="list-style-type: none"> evaluates one-step numerical expressions identifies the next term in a pattern identifies the coordinate plane 	<p>A student at this level</p> <ul style="list-style-type: none"> writes simple numerical expressions and applies a set of parentheses appropriately identifies or generates a rule for a given pattern identifies ordered pairs on a coordinate plane 	<p>A student at this level</p> <ul style="list-style-type: none"> writes, evaluates, and interprets numerical expressions using parentheses generates two numerical patterns from two rules, identifies the corresponding terms, and explains the corresponding relationships translates numerical patterns into ordered pairs and plots the points on a coordinate plane 	<p>A student at this level</p> <ul style="list-style-type: none"> writes, evaluates, and interprets numerical expressions with two or more sets of grouping symbols generates two complex numerical patterns from two rules, identifies the corresponding terms, and explains the corresponding relationships translates numerical patterns into ordered pairs, plots coordinate pairs on a coordinate plane, and explains data displayed on a coordinate plane

Number and Operations in Base Ten

	A student at this level	A student at this level	A student at this level	A student at this level
5.NBT.1 5.NBT.2 5.NBT.3 5.NBT.4 5.NBT.5 5.NBT.6 5.NBT.7	<ul style="list-style-type: none"> identifies the place value name for a given digit or the digit for a given place value in a decimal to the tenths adds and subtracts decimals to the hundredths 	<ul style="list-style-type: none"> identifies the place value name for a given digit or the digit for a given place value in a decimal to the thousandths reads, writes, and symbolically compares (using $<$, $>$, $=$) decimals to the hundredths multiplies multi-digit whole numbers multiplies decimals to the hundredths 	<ul style="list-style-type: none"> recognizes that the value of a digit differs by a factor of 10 compared with the same digit one place to the left or right reads, writes, and symbolically compares (using $<$, $>$, $=$) decimals to the thousandths in standard form uses place value to round decimals to the thousandths multiplies multi-digit whole numbers and divides multi-digit whole numbers with dividends up to four digits and divisors up to two digits multiplies and divides decimals to the hundredths 	<ul style="list-style-type: none"> reads, writes, and compares (using $<$, $>$, $=$) decimals to the thousandths, including in expanded form compares three or more decimals to the thousandths uses place value to round decimals to any place fluently multiplies and divides multi-digit numbers fluently adds, subtracts, multiplies, and divides decimals to the thousandths

		<ul style="list-style-type: none"> • multiplies and divides by powers of ten 	<ul style="list-style-type: none"> • uses whole-number exponents to denote powers of ten 	
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Number and Operations—Fractions				
5.NF.1 5.NF.2 5.NF.3 5.NF.4 5.NF.5 5.NF.6 5.NF.7	A student at this level <ul style="list-style-type: none"> • uses models to add and subtract unit fractions with unlike denominators 	A student at this level <ul style="list-style-type: none"> • uses models to add and subtract fractions with unlike denominators • solves single-step word problems with addition and subtraction of fractions with unlike denominators • fluently multiplies a fraction by a whole number 	A student at this level <ul style="list-style-type: none"> • adds and subtracts fractions and mixed numbers with unlike denominators • solves word problems with addition and subtraction of fractions with unlike denominators • recognizes a fraction as a numerator divided by a denominator • solves word problems involving division of whole numbers that leads to answers in the form of fractions or mixed numbers • fluently multiplies fractions by fractions and fractions by whole numbers • solves problems with areas of rectangles with fractional side lengths 	A student at this level <ul style="list-style-type: none"> • solves multistep word problems with addition and subtraction of fractions • recognizes and interprets a fraction as a numerator divided by a denominator • solves multistep word problems involving division of whole numbers that leads to answers in the form of fractions or mixed numbers • solves multistep problems with areas of rectangles with fractional side lengths

			<ul style="list-style-type: none"> interprets multiplication to modify the relative size of numbers with respect to fractions > 1 and < 1 solves problems involving multiplication of fractions and mixed numbers represents division of fractions by dividing unit fractions by whole numbers and dividing whole numbers by unit fractions, using models solves problems involving division of unit fractions and whole numbers, using models 	<ul style="list-style-type: none"> understands, interprets, and represents multiplication to modify the relative size of numbers with respect to fractions > 1 and < 1 solves multistep problems involving multiplication of fractions and mixed numbers represents and interprets division of fractions by dividing unit fractions by whole numbers and dividing whole numbers by unit fractions solves problems involving division of unit fractions and whole numbers, without the use of models
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Measurement and Data

5.MD.1 5.MD.2 5.MD.3 5.MD.4 5.MD.5 5.MD.6 5.MD.7	<p>A student at this level</p> <ul style="list-style-type: none"> calculates one-step conversions of length 	<p>A student at this level</p> <ul style="list-style-type: none"> calculates one-step conversions of length and mass within a given system creates line plots consisting of unit fractions 	<p>A student at this level</p> <ul style="list-style-type: none"> calculates one-step conversions of time, length, volume, and mass within a given system creates and interprets line plots consisting of unit fractions 	<p>A student at this level</p> <ul style="list-style-type: none"> calculates multistep conversions of time, length, volume, and mass creates line plots and interprets multiple characteristics of line plots
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	<ul style="list-style-type: none"> identifies measures of volume finds volumes of right rectangular prisms by counting unit cubes identifies perimeter and area as attributes of two-dimensional objects 	<ul style="list-style-type: none"> identifies volume as an attribute of three-dimensional objects 	<ul style="list-style-type: none"> identifies and represents volume as an attribute of three-dimensional objects finds volumes of rectangular prisms and recognizes volume relating to the multiplication of unit cubes along sides distinguishes between perimeter, area, and volume 	<ul style="list-style-type: none"> represents and analyzes volume as an attribute of three-dimensional objects identifies the appropriate application of perimeter, area, and volume
Geometry				
5.G.1 5.G.2 5.G.3 5.G.4	<p>A student at this level</p> <ul style="list-style-type: none"> plots points in Quadrant I on the coordinate plane identifies attributes of two-dimensional figures 	<p>A student at this level</p> <ul style="list-style-type: none"> identifies ordered pairs in Quadrant I on the coordinate plane classifies two-dimensional figures according to their attributes 	<p>A student at this level</p> <ul style="list-style-type: none"> uses x/y-coordinate systems to graph and identify points in Quadrant I on the coordinate plane recognizes two-dimensional figures by hierarchy 	<p>A student at this level</p> <ul style="list-style-type: none"> uses and applies x/y-coordinate systems and interprets and graphs real-world contexts and problems in Quadrant I on the coordinate plane classifies two-dimensional figures by hierarchy