



Alabama Achievement Level Descriptors

Grade 4 – Mathematics

The descriptions below provide a brief summary of typical performance for each level. The skills identified in each descriptor represent, but are not all-inclusive of, the skills a student should be able to demonstrate at each achievement level.

	Level 1: Emerging Learner	Level 2: Developing Learner	Level 3: Proficient Learner	Level 4: Distinguished Learner
Operations and Algebraic Thinking	<ul style="list-style-type: none"> Identifies the multiplicative equation which represents a verbal multiplicative situation. Identifies and expands simple shape and number patterns. Solves one-step word problems using the four operations with the use of visual models or manipulatives. 	<ul style="list-style-type: none"> Identifies equations which represent verbal statements of multiplicative comparisons. Recognizes and differentiates between some prime and composite numbers. Identifies and expands shape and number patterns, with up to two-digit numbers. Solves one-step word problems using the four operations. Finds factor pairs for a whole number in the range 1-50. 	<ul style="list-style-type: none"> Interprets a multiplication equation as a comparison or represents verbal statements of multiplicative comparisons as equations. Multiplies or divides to solve word problems involving multiplicative comparisons. Solves multi-step word problems with whole numbers and having whole number answers. Finds all factor pairs for a whole number in the range 1-100. Identifies numbers 1-100 as prime or composite. Generates a number or shape pattern that follows a given rule. Identifies apparent features of the pattern that were not explicit in the rule itself. 	<ul style="list-style-type: none"> Creates and explains real-world problems that could be solved using multiplicative comparisons. Answers questions and solves problems involving prime numbers, factors, and multiples and explains their reasoning. Makes sense of and solves multi-step problems involving all four operations with whole numbers. Explains how a whole number is a multiple of each of its factors. Describes rules for generating shape or number patterns.



Alabama Achievement Level Descriptors

Grade 4 – Mathematics

The descriptions below provide a brief summary of typical performance for each level. The skills identified in each descriptor represent, but are not all-inclusive of, the skills a student should be able to demonstrate at each achievement level.

	Level 1: Emerging Learner	Level 2: Developing Learner	Level 3: Proficient Learner	Level 4: Distinguished Learner
Number and Operations in Base Ten	<ul style="list-style-type: none"> Identifies the value of a digit in a two- or three-digit number. Multiplies a one-digit whole number by a two-digit whole number. Reads and writes up to three-digit numbers with base-ten numerals and number names only. 	<ul style="list-style-type: none"> Converts number names for multi-digit whole numbers to base ten numerals. Converts multi-digit whole numbers to number names and base-ten numerals. Multiplies a three number by a one-digit whole number and multiplies two two-digit numbers. Divides with up to three-digit dividends and one-digit divisors. 	<ul style="list-style-type: none"> Determines, in a multi-digit whole number, that a digit in one place represents ten times what it represents in the place to its right. Reads and writes whole numbers with base-ten numerals, number names, and expanded form. Compares 2 multi-digit numbers based on meaning of digits. Rounds multi-digit whole numbers to any place. Adds and subtracts multi-digit whole numbers. Multiplies up to a four-digit whole number by a one-digit whole number and multiplies two two-digit numbers. Explains multiplication and division calculations using equations, arrays, and/or models. Divides with up to four-digit dividends and one-digit divisors. 	<ul style="list-style-type: none"> Writes a multi-digit whole number in expanded form using addition and multiplication. Explains the relationship between two digits in a multi-digit whole number. Solves multi-step real-world problems involving operations with multi-digit numbers. Rounds multi-digit whole numbers to any place value, and chooses an appropriate rounded number given a context. Creates representations of multiplication and division calculations using equations, arrays, and/or models.



Alabama Achievement Level Descriptors

Grade 4 – Mathematics

The descriptions below provide a brief summary of typical performance for each level. The skills identified in each descriptor represent, but are not all-inclusive of, the skills a student should be able to demonstrate at each achievement level.

	Level 1: Emerging Learner	Level 2: Developing Learner	Level 3: Proficient Learner	Level 4: Distinguished Learner
Number and Operations – Fractions	<ul style="list-style-type: none"> Compares fractions with either the same numerator or the same denominator, given visual models. Adds and subtracts fractions with like denominators, given visual models. 	<ul style="list-style-type: none"> Compares fractions with visual models only. Solves mathematical or real-world problems involving addition and subtraction of fractions referring to the same whole with like denominators. Recognizes equivalent fractions with visual models only. 	<ul style="list-style-type: none"> Explain why a fraction a/b is equivalent to a fraction $(n \times a)/(n \times b)$. Compares fractions with different numerators and different denominators and recognizes comparisons are only valid if referring to the same whole. Recognizes a fraction a/b as a multiple of $1/b$ and uses this to multiply a fractions by a whole number, including word problems. Decomposes and recomposes fractions and mixed numbers referring to the same whole. Adds and subtracts fractions and mixed numbers referring to the same whole in mathematical and real-world problems. Recognizes and generates equivalent fractions using visual fraction models. 	<ul style="list-style-type: none"> Compares two fractions with different numerators and different denominators by creating common denominators and explains how they know their comparison is correct. Decomposes and recomposes fractions and mixed numbers referring to the same whole in more than one way. Justifies decomposition of fractions in solution of word problems.



Alabama Achievement Level Descriptors

Grade 4 – Mathematics

The descriptions below provide a brief summary of typical performance for each level. The skills identified in each descriptor represent, but are not all-inclusive of, the skills a student should be able to demonstrate at each achievement level.

	Level 1: Emerging Learner	Level 2: Developing Learner	Level 3: Proficient Learner	Level 4: Distinguished Learner
Number and Operations – Fractions	<ul style="list-style-type: none">Expresses a fraction with a denominator of 10 as an equivalent fraction with denominator 100.	<ul style="list-style-type: none">Uses decimal notation for fractions with denominators of 10.Compares decimals to the hundredths using visual models only.	<ul style="list-style-type: none">Expresses a fraction with denominator 10 as an equivalent fraction with denominator 100, and uses this technique to add two fractions with respective denominators 10 and 100.Uses decimal notation for fractions with denominators 10 or 100.Compares decimals between 0 and 1 to hundredths by reasoning about their size.Uses the mathematical symbols $<$, $=$, $>$ appropriately when making decimal comparisons.	<ul style="list-style-type: none">Compares decimals to hundredths when presented in a real-world context.Analyzes decimal representations of fractions with denominators of 10 or 100.



Alabama Achievement Level Descriptors

Grade 4 – Mathematics

The descriptions below provide a brief summary of typical performance for each level. The skills identified in each descriptor represent, but are not all-inclusive of, the skills a student should be able to demonstrate at each achievement level.

	Level 1: Emerging Learner	Level 2: Developing Learner	Level 3: Proficient Learner	Level 4: Distinguished Learner
Measurement and Data	<ul style="list-style-type: none"> Recognizes measurements of times, lengths, or liquid volumes (milliliters, liters). 	<ul style="list-style-type: none"> Measures times, lengths, or liquid volumes (milliliters, liters) and draws a picture or bar graph to organize the findings. Solves one-step measurement problems (liquid volume, time, mass, money). Solves simple area or perimeter problems for rectangles. Applies the relationships between angles in a two-dimensional figure to solve problems involving quadrilaterals. 	<ul style="list-style-type: none"> Solves problems involving measurement and conversion of measurements from a larger unit to a smaller unit. Records measurement equivalents in a two-column table. Converts measurements in fractional amounts expressed in a measurement system's larger unit in terms of a smaller unit in real-world situations. Uses the four operations to solve measurement problems (liquid volume, time, mass, money). Solves area and perimeter mathematical and real-world problems for rectangles. 	<ul style="list-style-type: none"> Solves problems involving measurement which include calculation of area and perimeter for rectangles, using all four operations with whole numbers, fractions, and decimals fluently.



Alabama Achievement Level Descriptors

Grade 4 – Mathematics

The descriptions below provide a brief summary of typical performance for each level. The skills identified in each descriptor represent, but are not all-inclusive of, the skills a student should be able to demonstrate at each achievement level.

	Level 1: Emerging Learner	Level 2: Developing Learner	Level 3: Proficient Learner	Level 4: Distinguished Learner
Measurement and Data	<ul style="list-style-type: none"> ▪ Identifies a line plot with tick marks that are whole number values to display a data set of measurements. ▪ Identifies angles. 	<ul style="list-style-type: none"> ▪ Recognizes the correct line plot to represent measurement data. ▪ Identifies a line plot with tick marks that are multiples of $\frac{1}{2}$, $\frac{1}{4}$, or $\frac{1}{8}$ to display a data set of measurements. ▪ Solves simple addition and subtraction problems with angles on a diagram. 	<ul style="list-style-type: none"> ▪ Constructs a line plot with tick marks that are multiples of $\frac{1}{2}$, $\frac{1}{4}$, or $\frac{1}{8}$ to display a data set of measurements. ▪ Solves addition and subtraction problems involving fractions by using information presented in a line plot. ▪ Recognizes angles and uses concepts of angle measurement to solve problems. ▪ Uses a protractor to measure and compare angles. ▪ Solves addition and subtraction problems to find unknown angles on a diagram in real-world and mathematical problems. 	<ul style="list-style-type: none"> ▪ Performs computations based on data presented in a line plot that includes fractions ▪ Uses models to visualize results and compare predictions with data. ▪ Uses a protractor to apply the additive property of non-overlapping angles in order to explain solutions for problems involving addition and subtraction of angle measures.



Alabama Achievement Level Descriptors

Grade 4 – Mathematics

The descriptions below provide a brief summary of typical performance for each level. The skills identified in each descriptor represent, but are not all-inclusive of, the skills a student should be able to demonstrate at each achievement level.

	Level 1: Emerging Learner	Level 2: Developing Learner	Level 3: Proficient Learner	Level 4: Distinguished Learner
Geometry	<ul style="list-style-type: none"> Identifies representations of points, lines, line segments, rays, and angles. Classifies basic two-dimensional figures. Recognizes symmetric figures. 	<ul style="list-style-type: none"> Identifies representations of perpendicular and parallel lines. Identifies right triangles. Identifies lines of symmetry. 	<ul style="list-style-type: none"> Draws points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines and identifies in two-dimensional figures. Classifies two-dimensional figures based on the presence or absence of parallel or perpendicular lines. Classifies two-dimensional figures based on the presence or absence of angles of a specified size. Recognizes right triangles as a category and identifies right triangles. Recognizes that a line of symmetry for a two-dimensional figure is a line across the figure such that the figure would be divided into matching parts if it were folded on the line. Identifies line-symmetric figures and draws lines of symmetry. 	<ul style="list-style-type: none"> Classifies two-dimensional figures based on the presence or absence of parallel or perpendicular lines in real-world contexts. Classifies two-dimensional figures based on the presence or absence of angles of a specified size in real-world contexts. Draws lines of symmetry in a two-dimensional figure.