

# Hands-On Standards Deluxe

Grades: 3, 4, 5, 6

States: Texas Essential Knowledge and Skills (TEKS)

Subjects: Mathematics

Texas Essential Knowledge and Skills (TEKS)  
Mathematics  
Grade 3

TEKS	TX.111.15 (3.1)	Number, operation, and quantitative reasoning. The student uses place value to communicate about increasingly large whole numbers in verbal and written form, including money.
STUDENT EXPECTATION	(3.1) (A)	The student is expected to use place value to read, write (in symbols and words), and describe the value of whole numbers through 999,999. <ul style="list-style-type: none"><li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Number and Operations (43044-1)</li></ul>
STUDENT EXPECTATION	(3.1) (B)	The student is expected to use place value to compare and order whole numbers through 9,999. <ul style="list-style-type: none"><li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Number and Operations (43044-1)</li></ul>
STUDENT EXPECTATION	(3.1) (C)	The student is expected to determine the value of a collection of coins and bills.
TEKS	TX.111.15 (3.2)	Number, operation, and quantitative reasoning. The student uses fraction names and symbols (with denominators of 12 or less) to describe fractional parts of whole objects or sets of objects.
STUDENT EXPECTATION	(3.2) (A)	The student is expected to construct concrete models of fractions. <ul style="list-style-type: none"><li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Number and Operations (43044-1)</li></ul>
STUDENT EXPECTATION	(3.2) (B)	The student is expected to compare fractional parts of whole objects or sets of objects in a problem situation using concrete models. <ul style="list-style-type: none"><li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Number and Operations (43044-1)</li></ul>
STUDENT EXPECTATION	(3.2) (C)	The student is expected to use fraction names and symbols to describe fractional parts of whole objects or sets of objects. <ul style="list-style-type: none"><li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Number and Operations (43044-1)</li></ul>
STUDENT EXPECTATION	(3.2) (D)	The student is expected to construct concrete models of equivalent fractions for fractional parts of whole objects. <ul style="list-style-type: none"><li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Number and Operations (43044-1)</li></ul>
TEKS	TX.111.15 (3.3)	Number, operation, and quantitative reasoning. The student adds and subtracts to solve meaningful problems involving whole numbers.

STUDENT EXPECTATION	(3.3) (A)	The student is expected to model addition and subtraction using pictures, words, and numbers.
STUDENT EXPECTATION	(3.3) (B)	The student is expected to select addition or subtraction and use the operation to solve problems involving whole numbers through 999.
TEKS	TX.111.15 (3.4)	Number, operation, and quantitative reasoning. The student recognizes and solves problems in multiplication and division situations.
STUDENT EXPECTATION	(3.4) (A)	The student is expected to learn and apply multiplication facts through 12 by 12 using concrete models and objects. <ul style="list-style-type: none"> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Number and Operations (43044-1)</li> </ul>
STUDENT EXPECTATION	(3.4) (B)	The student is expected to solve and record multiplication problems (up to two digits times one digit). <ul style="list-style-type: none"> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Number and Operations (43044-1)</li> </ul>
STUDENT EXPECTATION	(3.4) (C)	The student is expected to use models to solve division problems and use number sentences to record the solutions. <ul style="list-style-type: none"> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Algebra (43044-3)</li> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Number and Operations (43044-1)</li> </ul>
TEKS	TX.111.15 (3.5)	Number, operation, and quantitative reasoning. The student estimates to determine reasonable results.
STUDENT EXPECTATION	(3.5) (A)	The student is expected to round whole numbers to the nearest ten or hundred to approximate reasonable results in problem situations. <ul style="list-style-type: none"> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Number and Operations (43044-1)</li> </ul>
STUDENT EXPECTATION	(3.5) (B)	The student is expected to use strategies including rounding and compatible numbers to estimate solutions to addition and subtraction problems. <ul style="list-style-type: none"> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Number and Operations (43044-1)</li> </ul>
TEKS	TX.111.15 (3.6)	Patterns, relationships, and algebraic thinking. The student uses patterns to solve problems.
STUDENT EXPECTATION	(3.6) (A)	The student is expected to identify and extend whole-number and geometric patterns to make predictions and solve problems. <ul style="list-style-type: none"> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Algebra (43044-3)</li> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Geometry (43044-2)</li> </ul>
STUDENT EXPECTATION	(3.6) (B)	The student is expected to identify patterns in multiplication facts using concrete objects, pictorial models, or technology. <ul style="list-style-type: none"> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Number and Operations (43044-1)</li> </ul>
STUDENT EXPECTATION	(3.6) (C)	The student is expected to identify patterns in related multiplication and division sentences (fact families) such as $2 \times 3 = 6$ , $3 \times 2 = 6$ , $6 \div 2 = 3$ , $6 \div 3 =$

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TEKS	TX.111.15 (3.7)	Patterns, relationships, and algebraic thinking. The student uses lists, tables, and charts to express patterns and relationships.
STUDENT EXPECTATION	(3.7) (A)	The student is expected to generate a table of paired numbers based on a real-life situation such as insects and legs.
STUDENT EXPECTATION	(3.7) (B)	The student is expected to identify and describe patterns in a table of related number pairs based on a meaningful problem and extend the table.
TEKS	TX.111.15 (3.8)	Geometry and spatial reasoning. The student uses formal geometric vocabulary.
STUDENT EXPECTATION	(3.8) (A)	The student is expected to identify, classify, and describe two- and three-dimensional geometric figures by their attributes. The student compares two-dimensional figures, three-dimensional figures, or both by their attributes using formal geometry vocabulary. <ul style="list-style-type: none"> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Geometry (43044-2)</li> </ul>
TEKS	TX.111.15 (3.9)	Geometry and spatial reasoning. The student recognizes congruence and symmetry.
STUDENT EXPECTATION	(3.9) (A)	The student is expected to identify congruent two-dimensional figures. <ul style="list-style-type: none"> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Geometry (43044-2)</li> </ul>
STUDENT EXPECTATION	(3.9) (B)	The student is expected to create two-dimensional figures with lines of symmetry using concrete models and technology. <ul style="list-style-type: none"> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Geometry (43044-2)</li> </ul>
STUDENT EXPECTATION	(3.9) (C)	The student is expected to identify lines of symmetry in two-dimensional geometric figures. <ul style="list-style-type: none"> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Geometry (43044-2)</li> </ul>
TEKS	TX.111.15 (3.10)	Geometry and spatial reasoning. The student recognizes that a line can be used to represent numbers and fractions and their properties and relationships.
STUDENT EXPECTATION	(3.10) (A)	The student is expected to locate and name points on a number line using whole numbers and fractions , including halves and fourths.
TEKS	TX.111.15 (3.11)	Measurement. The student directly compares the attributes of length, area, weight/mass, and capacity, and uses comparative language to solve problems and answer questions. The student selects and uses standard units to describe length, area, capacity/volume, and weight/mass.
STUDENT EXPECTATION	(3.11) (A)	The student is expected to use linear measurement tools to estimate and measure lengths using standard units. <ul style="list-style-type: none"> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Measurement (43044-4)</li> </ul>
STUDENT EXPECTATION	(3.11) (B)	The student is expected to use standard units to find the perimeter of a shape. <ul style="list-style-type: none"> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Measurement (43044-4)</li> </ul>

STUDENT EXPECTATION	(3.11) (C)	The student is expected to use concrete and pictorial models of square units to determine the area of two-dimensional surfaces. <ul style="list-style-type: none"> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Measurement (43044-4)</li> </ul>
STUDENT EXPECTATION	(3.11) (D)	The student is expected to identify concrete models that approximate standard units of weight/mass and use them to measure weight/mass.
STUDENT EXPECTATION	(3.11) (E)	The student is expected to identify concrete models that approximate standard units for capacity and use them to measure capacity. <ul style="list-style-type: none"> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Measurement (43044-4)</li> </ul>
STUDENT EXPECTATION	(3.11) (F)	The student is expected to use concrete models that approximate cubic units to determine the volume of a given container or other three-dimensional geometric figure. <ul style="list-style-type: none"> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Measurement (43044-4)</li> </ul>
TEKS	TX.111.15 (3.12)	Measurement. The student reads and writes time and measures temperature in degrees Fahrenheit to solve problems.
STUDENT EXPECTATION	(3.12) (A)	The student is expected to use a thermometer to measure temperature.
STUDENT EXPECTATION	(3.12) (B)	The student is expected to tell and write time shown on analog and digital clocks. <ul style="list-style-type: none"> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Measurement (43044-4)</li> </ul>
TEKS	TX.111.15 (3.13)	Probability and statistics. The student solves problems by collecting, organizing, displaying, and interpreting sets of data.
STUDENT EXPECTATION	(3.13) (A)	The student is expected to collect, organize, record, and display data in pictographs and bar graphs where each picture or cell might represent more than one piece of data. <ul style="list-style-type: none"> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Data Analysis and Probability (43044-5)</li> </ul>
STUDENT EXPECTATION	(3.13) (B)	The student is expected to interpret information from pictographs and bar graphs. <ul style="list-style-type: none"> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Data Analysis and Probability (43044-5)</li> </ul>
STUDENT EXPECTATION	(3.13) (C)	The student is expected to use data to describe events as more likely than, less likely than, or equally likely as. <ul style="list-style-type: none"> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Data Analysis and Probability (43044-5)</li> </ul>
TEKS	TX.111.15 (3.14)	Underlying processes and mathematical tools. The student applies Grade 3 mathematics to solve problems connected to everyday experiences and activities in and outside of school.
STUDENT EXPECTATION	(3.14) (A)	The student is expected to identify the mathematics in everyday situations.

STUDENT EXPECTATION	(3.14) (B)	The student is expected to solve problems that incorporate understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness.
STUDENT EXPECTATION	(3.14) (C)	The student is expected to select or develop an appropriate problem-solving plan or strategy, including drawing a picture, looking for a pattern, systematic guessing and checking, acting it out, making a table, working a simpler problem, or working backwards to solve a problem. <ul style="list-style-type: none"> <li>• Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Algebra (43044-3)</li> <li>• Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Measurement (43044-4)</li> </ul>
STUDENT EXPECTATION	(3.14) (D)	The student is expected to use tools such as real objects, manipulatives, and technology to solve problems. <ul style="list-style-type: none"> <li>• Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Algebra (43044-3)</li> <li>• Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Measurement (43044-4)</li> </ul>
TEKS	TX.111.15 (3.15)	Underlying processes and mathematical tools. The student communicates about Grade 3 mathematics using informal language.
STUDENT EXPECTATION	(3.15) (A)	The student is expected to explain and record observations using objects, words, pictures, numbers, and technology. <ul style="list-style-type: none"> <li>• Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Algebra (43044-3)</li> <li>• Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Data Analysis and Probability (43044-5)</li> <li>• Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Geometry (43044-2)</li> <li>• Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Measurement (43044-4)</li> <li>• Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Number and Operations (43044-1)</li> </ul>
STUDENT EXPECTATION	(3.15) (B)	The student is expected to relate informal language to mathematical language and symbols. <ul style="list-style-type: none"> <li>• Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Algebra (43044-3)</li> <li>• Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Data Analysis and Probability (43044-5)</li> <li>• Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Geometry (43044-2)</li> <li>• Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Measurement (43044-4)</li> <li>• Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Number and Operations (43044-1)</li> </ul>
TEKS	TX.111.15 (3.16)	Underlying processes and mathematical tools. The student uses logical reasoning.
STUDENT EXPECTATION	(3.16) (A)	The student is expected to make generalizations from patterns or sets of examples and non-examples.
STUDENT EXPECTATION	(3.16) (B)	The student is expected to justify why an answer is reasonable and explain the solution process.

Texas Essential Knowledge and Skills (TEKS)  
Mathematics  
Grade 4

TEKS	TX.111.16 (4.1)	Number, operation, and quantitative reasoning. The student uses place value to represent whole numbers and decimals.
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STUDENT EXPECTATION	(4.1) (A)	The student is expected to use place value to read, write, compare, and order whole numbers through 999,999,999. <ul style="list-style-type: none"> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Number and Operations (43044-1)</li> </ul>
STUDENT EXPECTATION	(4.1) (B)	The student is expected to use place value to read, write, compare, and order decimals involving tenths and hundredths, including money, using concrete objects and pictorial models. <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Number and Operations (43044-1)</li> </ul>
TEKS	TX.111.16 (4.2)	Number, operation, and quantitative reasoning. The student describes and compares fractional parts of whole objects or sets of objects.
STUDENT EXPECTATION	(4.2) (A)	The student is expected to use concrete objects and pictorial models to generate equivalent fractions. <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Number and Operations (43044-1)</li> </ul>
STUDENT EXPECTATION	(4.2) (B)	The student is expected to model fraction quantities greater than one using concrete objects and pictorial models. <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> </ul>
STUDENT EXPECTATION	(4.2) (C)	The student is expected to compare and order fractions using concrete objects and pictorial models. <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Number and Operations (43044-1)</li> </ul>
STUDENT EXPECTATION	(4.2) (D)	The student is expected to relate decimals to fractions that name tenths and hundredths using concrete objects and pictorial models. <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Number and Operations (43044-1)</li> </ul>
TEKS	TX.111.16 (4.3)	Number, operation, and quantitative reasoning. The student adds and subtracts to solve meaningful problems involving whole numbers and decimals.
STUDENT EXPECTATION	(4.3) (A)	The student is expected to use addition and subtraction to solve problems involving whole numbers. <ul style="list-style-type: none"> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Number and Operations (43044-1)</li> </ul>
STUDENT EXPECTATION	(4.3) (B)	The student is expected to add and subtract decimals to the hundredths place using concrete objects and pictorial models. <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Number and Operations (43044-1)</li> </ul>

TEKS	TX.111.16 (4.4)	Number, operation, and quantitative reasoning. The student multiplies and divides to solve meaningful problems involving whole numbers.
STUDENT EXPECTATION	(4.4) (A)	The student is expected to model factors and products using arrays and area models. <ul style="list-style-type: none"> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Number and Operations (43044-1)</li> </ul>
STUDENT EXPECTATION	(4.4) (B)	The student is expected to represent multiplication and division situations in picture, word, and number form.
STUDENT EXPECTATION	(4.4) (C)	The student is expected to recall and apply multiplication facts through 12 x 12. <ul style="list-style-type: none"> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Number and Operations (43044-1)</li> </ul>
STUDENT EXPECTATION	(4.4) (D)	The student is expected to use multiplication to solve problems (no more than two digits times two digits without technology). <ul style="list-style-type: none"> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Number and Operations (43044-1)</li> </ul>
STUDENT EXPECTATION	(4.4) (E)	The student is expected to use division to solve problems (no more than one-digit divisors and three digit dividends without technology). <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Number and Operations (43044-1)</li> </ul>
TEKS	TX.111.16 (4.5)	Number, operation, and quantitative reasoning. The student estimates to determine reasonable results.
STUDENT EXPECTATION	(4.5) (A)	The student is expected to round whole numbers to the nearest ten, hundred, or thousand to approximate reasonable results in problem situations. <ul style="list-style-type: none"> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Number and Operations (43044-1)</li> </ul>
STUDENT EXPECTATION	(4.5) (B)	The student is expected to use strategies including rounding and compatible numbers to estimate solutions to multiplication and division problems.
TEKS	TX.111.16 (4.6)	Patterns, relationships, and algebraic thinking. The student uses patterns in multiplication and division.
STUDENT EXPECTATION	(4.6) (A)	The student is expected to use patterns and relationships to develop strategies to remember basic multiplication and division facts (such as the patterns in related multiplication and division number sentences (fact families) such as $9 \times 9 = 81$ and $81 \div 9 = 9$ ). <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Number and Operations (43044-1)</li> </ul>
STUDENT EXPECTATION	(4.6) (B)	The student is expected to use patterns to multiply by 10 and 100. <ul style="list-style-type: none"> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Number and Operations (43044-1)</li> </ul>
TEKS	TX.111.16 (4.7)	Patterns, relationships, and algebraic thinking. The student uses organizational structures to analyze and describe patterns and relationships.

STUDENT EXPECTATION	(4.7) (A)	The student is expected to describe the relationship between two sets of related data such as ordered pairs in a table. <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Algebra (43045-3)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Algebra (43046-3)</li> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Algebra (43044-3)</li> </ul>
TEKS	TX.111.16 (4.8)	Geometry and spatial reasoning. The student identifies and describes attributes of geometric figures using formal geometric language.
STUDENT EXPECTATION	(4.8) (A)	The student is expected to identify and describe right, acute, and obtuse angles. <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Geometry (43045-2)</li> </ul>
STUDENT EXPECTATION	(4.8) (B)	The student is expected to identify and describe parallel and intersecting (including perpendicular) lines using concrete objects and pictorial models. <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Geometry (43045-2)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Geometry (43046-2)</li> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Geometry (43044-2)</li> </ul>
STUDENT EXPECTATION	(4.8) (C)	The student is expected to use essential attributes to define two- and three-dimensional geometric figures. <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Geometry (43045-2)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Geometry (43046-2)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Measurement (43046-4)</li> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Geometry (43044-2)</li> </ul>
TEKS	TX.111.16 (4.9)	Geometry and spatial reasoning. The student connects transformations to congruence and symmetry.
STUDENT EXPECTATION	(4.9) (A)	The student is expected to demonstrate translations, reflections, and rotations using concrete models. <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Geometry (43045-2)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Geometry (43046-2)</li> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Geometry (43044-2)</li> </ul>
STUDENT EXPECTATION	(4.9) (B)	The student is expected to use translations, reflections, and rotations to verify that two shapes are congruent.
STUDENT EXPECTATION	(4.9) (C)	The student is expected to use reflections to verify that a shape has symmetry. <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Geometry (43045-2)</li> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Geometry (43044-2)</li> </ul>
TEKS	TX.111.16 (4.10)	Geometry and spatial reasoning. The student recognizes the connection between numbers and their properties and points on a line.
STUDENT	(4.10) (A)	The student is expected to locate and name points on a number line using whole numbers, fractions such as halves and fourths, and decimals such as

EXPECTATION		tenths.  <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> </ul>
TEKS	TX.111.16 (4.11)	Measurement. The student applies measurement concepts. The student is expected to estimate and measure to solve problems involving length (including perimeter) and area. The student uses measurement tools to measure capacity/volume and weight/mass.
STUDENT EXPECTATION	(4.11) (A)	The student is expected to estimate and use measurement tools to determine length (including perimeter), area, capacity and weight/mass using standard units SI (metric) and customary.  <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Measurement (43045-4)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Geometry (43046-2)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Measurement (43046-4)</li> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Measurement (43044-4)</li> </ul>
STUDENT EXPECTATION	(4.11) (B)	The student is expected to perform simple conversions between different units of length, between different units of capacity, and between different units of weight within the customary measurement system.
STUDENT EXPECTATION	(4.11) (C)	The student is expected to use concrete models of standard cubic units to measure volume.  <ul style="list-style-type: none"> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Measurement (43044-4)</li> </ul>
STUDENT EXPECTATION	(4.11) (D)	The student is expected to estimate volume in cubic units.  <ul style="list-style-type: none"> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Measurement (43044-4)</li> </ul>
STUDENT EXPECTATION	(4.11) (E)	The student is expected to explain the difference between weight and mass.
TEKS	TX.111.16 (4.12)	Measurement. The student applies measurement concepts. The student measures time and temperature (in degrees Fahrenheit and Celsius).
STUDENT EXPECTATION	(4.12) (A)	The student is expected to use a thermometer to measure temperature and changes in temperature.
STUDENT EXPECTATION	(4.12) (B)	The student is expected to use tools such as a clock with gears or a stopwatch to solve problems involving elapsed time.  <ul style="list-style-type: none"> <li>Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Measurement (43044-4)</li> </ul>
TEKS	TX.111.16 (4.13)	Probability and statistics. The student solves problems by collecting, organizing, displaying, and interpreting sets of data.
STUDENT EXPECTATION	(4.13) (A)	The student is expected to use concrete objects or pictures to make generalizations about determining all possible combinations of a given set of data or of objects in a problem situation.  <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Data Analysis and Probability (43045-5)</li> </ul>

STUDENT EXPECTATION	(4.13) (B)	<p>The student is expected to interpret bar graphs.</p> <ul style="list-style-type: none"> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Data Analysis and Probability (43046-5)</li> <li>• Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Data Analysis and Probability (43044-5)</li> </ul>
TEKS	TX.111.16 (4.14)	Underlying processes and mathematical tools. The student applies Grade 4 mathematics to solve problems connected to everyday experiences and activities in and outside of school.
STUDENT EXPECTATION	(4.14) (A)	<p>The student is expected to identify the mathematics in everyday situations.</p> <ul style="list-style-type: none"> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Algebra (43045-3)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Data Analysis and Probability (43045-5)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Geometry (43045-2)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Measurement (43045-4)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Algebra (43046-3)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Data Analysis and Probability (43046-5)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Geometry (43046-2)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Measurement (43046-4)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Number and Operations (43046-1)</li> </ul>
STUDENT EXPECTATION	(4.14) (B)	<p>The student is expected to solve problems that incorporate understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness.</p> <ul style="list-style-type: none"> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Algebra (43045-3)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Data Analysis and Probability (43045-5)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Geometry (43045-2)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Measurement (43045-4)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Algebra (43046-3)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Data Analysis and Probability (43046-5)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Geometry (43046-2)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Measurement (43046-4)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Number and Operations (43046-1)</li> </ul>
STUDENT EXPECTATION	(4.14) (C)	<p>The student is expected to select or develop an appropriate problem-solving plan or strategy, including drawing a picture, looking for a pattern, systematic guessing and checking, acting it out, making a table, working a simpler problem, or working backwards to solve a problem.</p> <ul style="list-style-type: none"> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Algebra (43045-3)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Data Analysis and Probability (43045-5)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Geometry (43045-2)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Measurement (43045-4)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Algebra (43046-3)</li> </ul>

		<ul style="list-style-type: none"> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Data Analysis and Probability (43046-5)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Geometry (43046-2)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Measurement (43046-4)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Number and Operations (43046-1)</li> <li>• Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Algebra (43044-3)</li> <li>• Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Measurement (43044-4)</li> </ul>
STUDENT EXPECTATION	(4.14) (D)	<p>The student is expected to use tools such as real objects, manipulatives, and technology to solve problems.</p> <ul style="list-style-type: none"> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Algebra (43045-3)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Data Analysis and Probability (43045-5)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Geometry (43045-2)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Measurement (43045-4)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Algebra (43046-3)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Data Analysis and Probability (43046-5)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Geometry (43046-2)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Measurement (43046-4)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Number and Operations (43046-1)</li> <li>• Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Algebra (43044-3)</li> <li>• Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Measurement (43044-4)</li> </ul>
TEKS	TX.111.16 (4.15)	Underlying processes and mathematical tools. The student communicates about Grade 4 mathematics using informal language.
STUDENT EXPECTATION	(4.15) (A)	<p>The student is expected to explain and record observations using objects, words, pictures, numbers, and technology.</p> <ul style="list-style-type: none"> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Algebra (43045-3)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Data Analysis and Probability (43045-5)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Geometry (43045-2)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Measurement (43045-4)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Algebra (43046-3)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Data Analysis and Probability (43046-5)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Geometry (43046-2)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Measurement (43046-4)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Number and Operations (43046-1)</li> <li>• Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Algebra (43044-3)</li> <li>• Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Data Analysis and Probability (43044-5)</li> <li>• Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Geometry (43044-2)</li> <li>• Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Measurement (43044-4)</li> <li>• Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Number and Operations (43044-1)</li> </ul>

STUDENT EXPECTATION	(4.15) (B)	<p>The student is expected to relate informal language to mathematical language and symbols.</p> <ul style="list-style-type: none"> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Algebra (43045-3)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Data Analysis and Probability (43045-5)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Geometry (43045-2)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Measurement (43045-4)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Algebra (43046-3)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Data Analysis and Probability (43046-5)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Geometry (43046-2)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Measurement (43046-4)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Number and Operations (43046-1)</li> <li>• Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Algebra (43044-3)</li> <li>• Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Data Analysis and Probability (43044-5)</li> <li>• Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Geometry (43044-2)</li> <li>• Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Measurement (43044-4)</li> <li>• Hands-On Standards, Deluxe Edition Kit, Grades 3-4: Number and Operations (43044-1)</li> </ul>
TEKS	TX.111.16 (4.16)	Underlying processes and mathematical tools. The student uses logical reasoning.
STUDENT EXPECTATION	(4.16) (A)	The student is expected to make generalizations from patterns or sets of examples and non-examples.
STUDENT EXPECTATION	(4.16) (B)	<p>The student is expected to justify why an answer is reasonable and explain the solution process.</p> <ul style="list-style-type: none"> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Algebra (43045-3)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Data Analysis and Probability (43045-5)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Geometry (43045-2)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Measurement (43045-4)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Algebra (43046-3)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Data Analysis and Probability (43046-5)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Geometry (43046-2)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Measurement (43046-4)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Number and Operations (43046-1)</li> </ul>

Texas Essential Knowledge and Skills (TEKS)  
 Mathematics  
 Grade 5

TEKS	TX.111.17 (5.1)	Number, operation, and quantitative reasoning. The student uses place value to represent whole numbers and decimals.
STUDENT EXPECTATION	(5.1) (A)	The student is expected to use place value to read, write, compare, and order whole numbers through the 999,999,999,999.
STUDENT EXPECTATION	(5.1) (B)	The student is expected to use place value to read, write, compare, and order decimals through the thousandths place.

		<ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> </ul>
TEKS	TX.111.17 (5.2)	Number, operation, and quantitative reasoning. The student uses fractions in problem-solving situations.
STUDENT EXPECTATION	(5.2) (A)	<p>The student is expected to generate a fraction equivalent to a given fraction such as <math>\frac{1}{2}</math> and <math>\frac{3}{6}</math> or <math>\frac{4}{12}</math> and <math>\frac{1}{3}</math>.</p> <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> </ul>
STUDENT EXPECTATION	(5.2) (B)	The student is expected to generate a mixed number equivalent to a given improper fraction or generate an improper fraction equivalent to a given mixed number.
STUDENT EXPECTATION	(5.2) (C)	<p>The student is expected to compare two fractional quantities in problem-solving situations using a variety of methods, including common denominators.</p> <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> </ul>
STUDENT EXPECTATION	(5.2) (D)	<p>The student is expected to use models to relate decimals to fractions that name tenths, hundredths, and thousandths.</p> <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> </ul>
TEKS	TX.111.17 (5.3)	Number, operation, and quantitative reasoning. The student adds, subtracts, multiplies, and divides to solve meaningful problems.
STUDENT EXPECTATION	(5.3) (A)	<p>The student is expected to use addition and subtraction to solve problems involving whole numbers and decimals.</p> <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> </ul>
STUDENT EXPECTATION	(5.3) (B)	The student is expected to use multiplication to solve problems involving whole numbers (no more than three digits times two digits without technology).
STUDENT EXPECTATION	(5.3) (C)	<p>The student is expected to use division to solve problems involving whole numbers (no more than two-digit divisors and three-digit dividends without technology) , including interpreting the remainder within a given context.</p> <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> </ul>
STUDENT EXPECTATION	(5.3) (D)	The student is expected to identify common factors of a set of whole numbers.
STUDENT EXPECTATION	(5.3) (E)	The student is expected to model situations using addition and/or subtraction involving fractions with like denominators using concrete objects, pictures, words, and numbers.
TEKS	TX.111.17 (5.4)	Number, operation, and quantitative reasoning. The student estimates to determine reasonable results.
STUDENT EXPECTATION	(5.4) (A)	The student is expected to use strategies, including rounding and compatible numbers to estimate solutions to addition, subtraction, multiplication,

		and division problems.
TEKS	TX.111.17 (5.5)	Patterns, relationships, and algebraic thinking. The student makes generalizations based on observed patterns and relationships.
STUDENT EXPECTATION	(5.5) (A)	The student is expected to describe the relationship between sets of data in graphic organizers such as lists, tables, charts, and diagrams. <ul style="list-style-type: none"> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Algebra (43045-3)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Algebra (43046-3)</li> </ul>
STUDENT EXPECTATION	(5.5) (B)	The student is expected to identify prime and composite numbers using concrete objects, pictorial models, and patterns in factor pairs. <ul style="list-style-type: none"> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> </ul>
TEKS	TX.111.17 (5.6)	Patterns, relationships, and algebraic thinking. The student describes relationships mathematically.
STUDENT EXPECTATION	(5.6) (A)	The student is expected to select from and use diagrams and equations such as $y = 5 + 3$ to represent meaningful problem situations. <ul style="list-style-type: none"> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Algebra (43045-3)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Algebra (43046-3)</li> </ul>
TEKS	TX.111.17 (5.7)	Geometry and spatial reasoning. The student generates geometric definitions using critical attributes.
STUDENT EXPECTATION	(5.7) (A)	The student is expected to identify essential attributes including parallel, perpendicular, and congruent parts of two- and three-dimensional geometric figures. <ul style="list-style-type: none"> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Geometry (43045-2)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Geometry (43046-2)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Measurement (43046-4)</li> </ul>
TEKS	TX.111.17 (5.8)	Geometry and spatial reasoning. The student models transformations.
STUDENT EXPECTATION	(5.8) (A)	The student is expected to sketch the results of translations, rotations, and reflections on a Quadrant I coordinate grid. <ul style="list-style-type: none"> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Geometry (43045-2)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Geometry (43046-2)</li> </ul>
STUDENT EXPECTATION	(5.8) (B)	The student is expected to identify the transformation that generates one figure from the other when given two congruent figures on a Quadrant I coordinate grid.
TEKS	TX.111.17 (5.9)	Geometry and spatial reasoning. The student recognizes the connection between ordered pairs of numbers and locations of points on a plane.
STUDENT EXPECTATION	(5.9) (A)	The student is expected to locate and name points on a coordinate grid using ordered pairs of whole numbers.

		<ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Algebra (43045-3)</li> </ul>
TEKS	TX.111.17 (5.10)	Measurement. The student applies measurement concepts involving length (including perimeter), area, capacity/volume, and weight/mass to solve problems.
STUDENT EXPECTATION	(5.10) (A)	The student is expected to perform simple conversions within the same measurement system (SI (metric) or customary).
STUDENT EXPECTATION	(5.10) (B)	<p>The student is expected to connect models for perimeter, area, and volume with their respective formulas.</p> <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Measurement (43045-4)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Geometry (43046-2)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Measurement (43046-4)</li> </ul>
STUDENT EXPECTATION	(5.10) (C)	<p>The student is expected to select and use appropriate units and formulas to measure length, perimeter, area, and volume.</p> <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Measurement (43045-4)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Geometry (43046-2)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Measurement (43046-4)</li> </ul>
TEKS	TX.111.17 (5.11)	Measurement. The student applies measurement concepts. The student measures time and temperature (in degrees Fahrenheit and Celsius).
STUDENT EXPECTATION	(5.11) (A)	The student is expected to solve problems involving changes in temperature.
STUDENT EXPECTATION	(5.11) (B)	The student is expected to solve problems involving elapsed time.
TEKS	TX.111.17 (5.12)	Probability and statistics. The student describes and predicts the results of a probability experiment.
STUDENT EXPECTATION	(5.12) (A)	<p>The student is expected to use fractions to describe the results of an experiment.</p> <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Data Analysis and Probability (43045-5)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Data Analysis and Probability (43046-5)</li> </ul>
STUDENT EXPECTATION	(5.12) (B)	The student is expected to use experimental results to make predictions.
STUDENT EXPECTATION	(5.12) (C)	The student is expected to list all possible outcomes of a probability experiment such as tossing a coin.
TEKS	TX.111.17 (5.13)	Probability and statistics. The student solves problems by collecting, organizing, displaying, and interpreting sets of data.
STUDENT EXPECTATION	(5.13) (A)	<p>The student is expected to use tables of related number pairs to make line graphs;</p> <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Data Analysis and Probability (43045-5)</li> </ul>
STUDENT EXPECTATION	(5.13) (B)	The student is expected to describe characteristics of data presented in tables and graphs including median, mode, and range.

		<ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Data Analysis and Probability (43045-5)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Data Analysis and Probability (43046-5)</li> </ul>
STUDENT EXPECTATION	(5.13) (C)	<p>The student is expected to graph a given set of data using an appropriate graphical representation such as a picture or line graph.</p> <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Data Analysis and Probability (43045-5)</li> </ul>
TEKS	TX.111.17 (5.14)	Underlying processes and mathematical tools. The student applies Grade 5 mathematics to solve problems connected to everyday experiences and activities in and outside of school.
STUDENT EXPECTATION	(5.14) (A)	<p>The student is expected to identify the mathematics in everyday situations.</p> <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Algebra (43045-3)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Data Analysis and Probability (43045-5)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Geometry (43045-2)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Measurement (43045-4)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Algebra (43046-3)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Data Analysis and Probability (43046-5)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Geometry (43046-2)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Measurement (43046-4)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Number and Operations (43046-1)</li> </ul>
STUDENT EXPECTATION	(5.14) (B)	<p>The student is expected to solve problems that incorporate understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness.</p> <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Algebra (43045-3)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Data Analysis and Probability (43045-5)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Geometry (43045-2)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Measurement (43045-4)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Algebra (43046-3)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Data Analysis and Probability (43046-5)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Geometry (43046-2)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Measurement (43046-4)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Number and Operations (43046-1)</li> </ul>
STUDENT EXPECTATION	(5.14) (C)	<p>The student is expected to select or develop an appropriate problem-solving plan or strategy, including drawing a picture, looking for a pattern, systematic guessing and checking, acting it out, making a table, working a simpler problem, or working backwards to solve a problem.</p> <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Algebra (43045-3)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Data Analysis and Probability (43045-5)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Geometry (43045-2)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Measurement (43045-4)</li> </ul>

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STUDENT EXPECTATION	(5.14) (D)	<p>The student is expected to use tools such as real objects, manipulatives, and technology to solve problems.</p> <ul style="list-style-type: none"> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Algebra (43045-3)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Data Analysis and Probability (43045-5)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Geometry (43045-2)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Measurement (43045-4)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Algebra (43046-3)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Data Analysis and Probability (43046-5)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Geometry (43046-2)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Measurement (43046-4)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Number and Operations (43046-1)</li> </ul>
TEKS	TX.111.17 (5.15)	Underlying processes and mathematical tools. The student communicates about Grade 5 mathematics using informal language.
STUDENT EXPECTATION	(5.15) (A)	<p>The student is expected to explain and record observations using objects, words, pictures, numbers, and technology.</p> <ul style="list-style-type: none"> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Algebra (43045-3)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Data Analysis and Probability (43045-5)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Geometry (43045-2)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Measurement (43045-4)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Algebra (43046-3)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Data Analysis and Probability (43046-5)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Geometry (43046-2)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Measurement (43046-4)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Number and Operations (43046-1)</li> </ul>
STUDENT EXPECTATION	(5.15) (B)	<p>The student is expected to relate informal language to mathematical language and symbols.</p> <ul style="list-style-type: none"> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Algebra (43045-3)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Data Analysis and Probability (43045-5)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Geometry (43045-2)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Measurement (43045-4)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Algebra (43046-3)</li> </ul>

		<ul style="list-style-type: none"> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Data Analysis and Probability (43046-5)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Geometry (43046-2)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Measurement (43046-4)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Number and Operations (43046-1)</li> </ul>
<b>TEKS</b>	<b>TX.111.17 (5.16)</b>	<b>Underlying processes and mathematical tools. The student uses logical reasoning.</b>
<b>STUDENT EXPECTATION</b>	<b>(5.16) (A)</b>	The student is expected to make generalizations from patterns or sets of examples and non-examples.
<b>STUDENT EXPECTATION</b>	<b>(5.16) (B)</b>	<p>The student is expected to justify why an answer is reasonable and explain the solution process.</p> <ul style="list-style-type: none"> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Algebra (43045-3)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Data Analysis and Probability (43045-5)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Geometry (43045-2)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Measurement (43045-4)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Algebra (43046-3)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Data Analysis and Probability (43046-5)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Geometry (43046-2)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Measurement (43046-4)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Number and Operations (43046-1)</li> </ul>

**Texas Essential Knowledge and Skills (TEKS)**  
**Mathematics**  
**Grade 6**

<b>TEKS</b>	<b>TX.111.22 (6.1)</b>	<b>Number, operation, and quantitative reasoning. The student represents and uses rational numbers in a variety of equivalent forms.</b>
<b>STUDENT EXPECTATION</b>	<b>(6.1) (A)</b>	<p>The student is expected to compare and order non-negative rational numbers.</p> <ul style="list-style-type: none"> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Number and Operations (43046-1)</li> </ul>
<b>STUDENT EXPECTATION</b>	<b>(6.1) (B)</b>	<p>The student is expected to generate equivalent forms of rational numbers including whole numbers, fractions, and decimals.</p> <ul style="list-style-type: none"> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Number and Operations (43046-1)</li> </ul>
<b>STUDENT EXPECTATION</b>	<b>(6.1) (C)</b>	The student is expected to use integers to represent real-life situations.
<b>STUDENT EXPECTATION</b>	<b>(6.1) (D)</b>	<p>The student is expected to write prime factorizations using exponents.</p> <ul style="list-style-type: none"> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> </ul>

STUDENT EXPECTATION	(6.1) (E)	The student is expected to identify factors of a positive integer, common factors, and the greatest common factor of a set of positive integers. <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> </ul>
STUDENT EXPECTATION	(6.1) (F)	The student is expected to identify multiples of a positive integer and common multiples and the least common multiple of a set of positive integers.
TEKS	TX.111.22 (6.2)	Number, operation, and quantitative reasoning. The student adds, subtracts, multiplies, and divides to solve problems and justify solutions.
STUDENT EXPECTATION	(6.2) (A)	The student is expected to model addition and subtraction situations involving fractions with objects, pictures, words, and numbers. <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> </ul>
STUDENT EXPECTATION	(6.2) (B)	The student is expected to use addition and subtraction to solve problems involving fractions and decimals. <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> </ul>
STUDENT EXPECTATION	(6.2) (C)	The student is expected to use multiplication and division of whole numbers to solve problems including situations involving equivalent ratios and rates. <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Number and Operations (43046-1)</li> </ul>
STUDENT EXPECTATION	(6.2) (D)	The student is expected to estimate and round to approximate reasonable results and to solve problems where exact answers are not required.
STUDENT EXPECTATION	(6.2) (E)	The student is expected to use order of operations to simplify whole number expressions (without exponents) in problem solving situations. <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Algebra (43045-3)</li> </ul>
TEKS	TX.111.22 (6.3)	Patterns, relationships, and algebraic thinking. The student solves problems involving direct proportional relationships.
STUDENT EXPECTATION	(6.3) (A)	The student is expected to use ratios to describe proportional situations. <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Number and Operations (43046-1)</li> </ul>
STUDENT EXPECTATION	(6.3) (B)	The student is expected to represent ratios and percents with concrete models, fractions, and decimals. <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Number and Operations (43046-1)</li> </ul>
STUDENT EXPECTATION	(6.3) (C)	The student is expected to use ratios to make predictions in proportional situations. <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> </ul>

		<ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Number and Operations (43046-1)</li> </ul>
TEKS	TX.111.22 (6.4)	Patterns, relationships, and algebraic thinking. The student uses letters as variables in mathematical expressions to describe how one quantity changes when a related quantity changes.
STUDENT EXPECTATION	(6.4) (A)	<p>The student is expected to use tables and symbols to represent and describe proportional and other relationships such as those involving conversions, arithmetic sequences (with a constant rate of change), perimeter and area.</p> <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Measurement (43045-4)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Measurement (43046-4)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Number and Operations (43046-1)</li> </ul>
STUDENT EXPECTATION	(6.4) (B)	<p>The student is expected to use tables of data to generate formulas representing relationships involving perimeter, area, volume of a rectangular prism, etc.</p> <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Measurement (43045-4)</li> </ul>
TEKS	TX.111.22 (6.5)	Patterns, relationships, and algebraic thinking. The student uses letters to represent an unknown in an equation.
STUDENT EXPECTATION	(6.5) (A)	<p>The student is expected to formulate equations from problem situations described by linear relationships.</p> <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Algebra (43046-3)</li> </ul>
TEKS	TX.111.22 (6.6)	Geometry and spatial reasoning. The student uses geometric vocabulary to describe angles, polygons, and circles.
STUDENT EXPECTATION	(6.6) (A)	<p>The student is expected to use angle measurements to classify angles as acute, obtuse, or right.</p> <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Geometry (43045-2)</li> </ul>
STUDENT EXPECTATION	(6.6) (B)	<p>The student is expected to identify relationships involving angles in triangles and quadrilaterals.</p> <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Geometry (43045-2)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Geometry (43046-2)</li> </ul>
STUDENT EXPECTATION	(6.6) (C)	The student is expected to describe the relationship between radius, diameter, and circumference of a circle.
TEKS	TX.111.22 (6.7)	Geometry and spatial reasoning. The student uses coordinate geometry to identify location in two dimensions.
STUDENT EXPECTATION	(6.7) (A)	<p>The student is expected to locate and name points on a coordinate plane using ordered pairs of non-negative rational numbers.</p> <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Algebra (43045-3)</li> </ul>
TEKS	TX.111.22	Measurement. The student solves application problems involving estimation and measurement of length, area, time, temperature, volume,

	(6.8)	weight, and angles.
STUDENT EXPECTATION	(6.8) (A)	The student is expected to estimate measurements (including circumference) and evaluate reasonableness of results.
STUDENT EXPECTATION	(6.8) (B)	The student is expected to select and use appropriate units, tools, or formulas to measure and to solve problems involving length (including perimeter), area, time, temperature, volume, and weight. <ul style="list-style-type: none"> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Measurement (43045-4)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Geometry (43046-2)</li> </ul>
STUDENT EXPECTATION	(6.8) (C)	The student is expected to measure angles. <ul style="list-style-type: none"> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Geometry (43045-2)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Measurement (43046-4)</li> </ul>
STUDENT EXPECTATION	(6.8) (D)	The student is expected to convert measures within the same measurement system (customary and metric) based on relationships between units.
TEKS	TX.111.22 (6.9)	Probability and statistics. The student uses experimental and theoretical probability to make predictions.
STUDENT EXPECTATION	(6.9) (A)	The student is expected to construct sample spaces using lists and tree diagrams. <ul style="list-style-type: none"> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Data Analysis and Probability (43045-5)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Data Analysis and Probability (43046-5)</li> </ul>
STUDENT EXPECTATION	(6.9) (B)	The student is expected to find the probabilities of a simple event and its complement and describe the relationship between the two. <ul style="list-style-type: none"> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Data Analysis and Probability (43045-5)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Data Analysis and Probability (43046-5)</li> </ul>
TEKS	TX.111.22 (6.10)	Probability and statistics. The student uses statistical representations to analyze data.
STUDENT EXPECTATION	(6.10) (A)	The student is expected to select and use an appropriate representation for presenting and displaying different graphical representations of the same data including line plot, line graph, bar graph, and stem and leaf plot.
STUDENT EXPECTATION	(6.10) (B)	The student is expected to identify mean (using concrete objects and pictorial models), median, mode, and range of a set of data. <ul style="list-style-type: none"> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Data Analysis and Probability (43045-5)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Data Analysis and Probability (43046-5)</li> </ul>
STUDENT EXPECTATION	(6.10) (C)	The student is expected to sketch circle graphs to display data. <ul style="list-style-type: none"> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Data Analysis and Probability (43045-5)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Data Analysis and Probability (43046-5)</li> </ul>

STUDENT EXPECTATION	(6.10) (D)	The student is expected to solve problems by collecting, organizing, displaying, and interpreting data.
TEKS	TX.111.22 (6.11)	Underlying processes and mathematical tools. The student applies Grade 6 mathematics to solve problems connected to everyday experiences, investigations in other disciplines, and activities in and outside of school.
STUDENT EXPECTATION	(6.11) (A)	<p>The student is expected to identify and apply mathematics to everyday experiences, to activities in and outside of school, with other disciplines, and with other mathematical topics.</p> <ul style="list-style-type: none"> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Algebra (43045-3)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Data Analysis and Probability (43045-5)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Geometry (43045-2)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Measurement (43045-4)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Algebra (43046-3)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Data Analysis and Probability (43046-5)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Geometry (43046-2)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Measurement (43046-4)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Number and Operations (43046-1)</li> </ul>
STUDENT EXPECTATION	(6.11) (B)	<p>The student is expected to use a problem-solving model that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness.</p> <ul style="list-style-type: none"> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Algebra (43045-3)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Data Analysis and Probability (43045-5)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Geometry (43045-2)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Measurement (43045-4)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Algebra (43046-3)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Data Analysis and Probability (43046-5)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Geometry (43046-2)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Measurement (43046-4)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Number and Operations (43046-1)</li> </ul>
STUDENT EXPECTATION	(6.11) (C)	<p>The student is expected to select or develop an appropriate problem-solving strategy from a variety of different types, including drawing a picture, looking for a pattern, systematic guessing and checking, acting it out, making a table, working a simpler problem, or working backwards to solve a problem.</p> <ul style="list-style-type: none"> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Algebra (43045-3)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Data Analysis and Probability (43045-5)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Geometry (43045-2)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Measurement (43045-4)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Algebra (43046-3)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Data Analysis and Probability (43046-5)</li> <li>• Hands-On Standards Deluxe Edition Kit, Grades 7-8: Geometry (43046-2)</li> </ul>

		<ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Measurement (43046-4)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Number and Operations (43046-1)</li> </ul>
STUDENT EXPECTATION	(6.11) (D)	<p>The student is expected to select tools such as real objects, manipulatives, paper/pencil, and technology or techniques such as mental math, estimation, and number sense to solve problems.</p> <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Algebra (43045-3)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Data Analysis and Probability (43045-5)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Geometry (43045-2)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Measurement (43045-4)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Algebra (43046-3)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Data Analysis and Probability (43046-5)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Measurement (43046-4)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Number and Operations (43046-1)</li> </ul>
TEKS	TX.111.22 (6.12)	Underlying processes and mathematical tools. The student communicates about Grade 6 mathematics through informal and mathematical language, representations, and models.
STUDENT EXPECTATION	(6.12) (A)	<p>The student is expected to communicate mathematical ideas using language, efficient tools, appropriate units, and graphical, numerical, physical, or algebraic mathematical models.</p> <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Algebra (43045-3)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Data Analysis and Probability (43045-5)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Geometry (43045-2)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Measurement (43045-4)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Algebra (43046-3)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Data Analysis and Probability (43046-5)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Geometry (43046-2)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Measurement (43046-4)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Number and Operations (43046-1)</li> </ul>
STUDENT EXPECTATION	(6.12) (B)	<p>The student is expected to evaluate the effectiveness of different representations to communicate ideas.</p> <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Algebra (43045-3)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Data Analysis and Probability (43045-5)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Geometry (43045-2)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Measurement (43045-4)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Algebra (43046-3)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Data Analysis and Probability (43046-5)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Geometry (43046-2)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Measurement (43046-4)</li> </ul>

		<ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Number and Operations (43046-1)</li> </ul>
TEKS	TX.111.22 (6.13)	Underlying processes and mathematical tools. The student uses logical reasoning to make conjectures and verify conclusions.
STUDENT EXPECTATION	(6.13) (A)	The student is expected to make conjectures from patterns or sets of examples and non-examples.
STUDENT EXPECTATION	(6.13) (B)	<p>The student is expected to validate his/her conclusions using mathematical properties and relationships.</p> <ul style="list-style-type: none"> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Algebra (43045-3)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Data Analysis and Probability (43045-5)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Geometry (43045-2)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Measurement (43045-4)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 5-6: Number and Operations (43045-1)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Algebra (43046-3)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Data Analysis and Probability (43046-5)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Geometry (43046-2)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Measurement (43046-4)</li> <li>Hands-On Standards Deluxe Edition Kit, Grades 7-8: Number and Operations (43046-1)</li> </ul>

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