

Los Angeles Unified School District  
**Mathematics Grade 2**

**Assessment OF Learning  
California Standards Tests:**

Provide summative, end-of-year or end-of-course results that document student achievement

GRADE 2 MATHEMATICS STANDARDS	# of Items	%
Number Sense	38	58%
1.1* Count, read, and write whole numbers to 1,000 and identify the place value for each digit.	3	
1.2 Use words, models, and expanded forms.	1	
1.3* Order and compare whole numbers to 1,000 by using the symbols <, =, >.	4	
2.1* Understand and use the inverse relationship between addition and subtraction to solve problems and check solutions.	2 1/2**	
2.2* Find the sum or difference of two whole numbers up to three digits long.	4	
3.1* Use repeated addition, arrays, and counting by multiples to do multiplication.	2	
3.2* Use repeated subtraction, equal sharing, and forming equal groups with remainders to do division.	3	
3.3* Know the multiplication tables of 2s, 5s, and 10s and commit them to memory.	3	
4.1* Recognize, name, and compare unit fractions	3	
4.2* Recognize fractions of a whole and parts of a group.	3	
4.3* Know that when all fractional parts are included, such as four-fourths, the result is equal to the whole and to one.	3	
5.1* Solve problems using combinations of coins and bills.	3	
5.2* Know and use the decimal notation and the dollar and cent symbols for money.	3	
6.1 Recognize when an estimate is reasonable in measurements.	1/2**	
Algebra and Functions	6	9%
1.1* Use the commutative and associative rules to simplify mental calculations and to check results.	4	
1.2 Relate problem situations to number sentences involving addition and subtraction.	1	
1.3 Solve addition and subtraction problems by using data from simple charts, picture graphs, and number sentences.	1	
Measurement and Geometry	14	22%
1.1 Measure the length of objects by iterating (repeating) a nonstandard or standard unit.	1	
1.2 Use different units to measure the same object and predict whether the measure will be greater or smaller when a different unit is used.	1	
1.3* Measure the length of an object to the nearest inch and/or centimeter.	3	
1.4 Tell time to the nearest quarter hour and know relationships of time.	2	
1.5 Determine the duration of intervals of time in hours.	1	
2.1* Describe and classify plane and solid geometric shapes according to the number and shape of faces, edges, and vertices.	3	
2.2* Put shapes together and take them apart to form other shapes.	3	
Statistics, Data Analysis, and Probability	7	11%
1.1 Record numerical data in systematic ways, keeping track of what has been counted.	2	
1.2 Represent the same data set in more than one way.	2	
1.3* Measure the length of an object to the nearest inch and/or centimeter.	2	
1.4 Ask and answer simple questions related to data representations.	1	
GRADE 2 TOTAL	65	100%

\* Key standards

\*\* Fractional values indicate rotated standards

NOTE: Non-assessed or embedded standards are omitted.

**Assessment FOR Learning  
LAUSD Periodic Assessments:**

Provide formative, ongoing data which can be used to increase student achievement

**QUARTER 1 ASSESSMENT**

GRADE 2 MATHEMATICS STANDARDS	# of Items
Number Sense	12
1.1* Count, read, and write whole numbers to 1,000 ...	2
1.2 Use words, models, and expanded forms.	2
1.3* Order and compare whole numbers to 1,000 by using the symbols <, =, >.	4
2.1* Understand and use the inverse relationship between addition and subtraction to solve problems ...	4
Algebra and Functions	15
1.1* Use the commutative and associative rules to simplify...	5
1.2 Relate problem situations to number sentences ...	2
1.3 Solve addition and subtraction problems by using data from simple charts, picture graphs...	2
2.1* Describe and classify plane and solid geometric shapes according to the number ...	3
2.2* Put shapes together and take them apart to form other shapes.	3
Statistics, Data Analysis, and Probability	2
2.1 Recognize, describe, and extend patterns and determine a next term in linear patterns (e.g., 4,8,12,...; the number of ears on one horse, two horses, three horses, four horses).	2

**QUARTER 2 ASSESSMENT**

GRADE 2 MATHEMATICS STANDARDS	# of Items
Number Sense	19
1.3* Order and compare whole numbers to 1,000 by using the symbols <, =, >.	1
2.1* Understand and use the inverse relationship between addition and subtraction to solve problems ...	4
2.2* Find the sum or difference of two whole numbers...	3
4.1* Recognize, name, and compare unit fractions	3
4.2* Recognize fractions of a whole and parts of a group.	3
4.3* Know that when all fractional parts are included, such as four-fourths, the result is equal to ...	3
6.1 Recognize when an estimate is reasonable in measurements.	2
Algebra and Functions	10
1.3 Solve addition and subtraction problems by using data from simple charts, picture graphs...	2
1.3* Measure the length of an object to the nearest inch and/or centimeter.	2
1.4 Tell time to the nearest quarter hour and know...	2
1.3* Measure the length of an object to the nearest inch and/or centimeter.	2
1.4 Tell time to the nearest quarter hour and know relationships of time.	2
Statistics, Data Analysis, and Probability	2
2.1 Recognize, describe, and extend patterns and determine a next term in linear patterns (e.g., 4,8,12,...; the number of ears on one horse, two horses, three horses, four horses).	2

**QUARTER 3 ASSESSMENT**

GRADE 2 MATHEMATICS STANDARDS	# of Items
Number Sense	21
1.1* Count, read, and write whole numbers to 1,000 and identify the place value for each digit.	3
1.2 Use words, models, and expanded forms.	2
1.3* Order and compare whole numbers to 1,000 by using the symbols <, =, >.	5
2.2* Find the sum or difference of two whole numbers...	4
3.1* Use repeated addition, arrays, and counting by multiples to do multiplication.	2
3.2* Use repeated subtraction, equal sharing, and forming equal groups with remainders to do division.	2
3.3* Know the multiplication tables of 2s, 5s, and 10s...	3
Algebra and Functions	6
5.1* Solve problems using combinations of coins and bills.	4
5.2* Know and use the decimal notation and the dollar...	2
Statistics, Data Analysis, and Probability	4
1.1 Record numerical data in systematic ways, keeping track of what has been counted.	2
1.2 Represent the same data set in more than one way.	2

NOTE: Unshaded standards are not separately assessed on the CST.

Los Angeles Unified School District  
**Mathematics Grade 3**

**Assessment OF Learning  
California Standards Tests:**

Provide summative, end-of-year or end-of-course results that document student achievement

GRADE 3 MATHEMATICS STANDARDS	# of Items	%
Number Sense	32	49%
1.1 Count, read, and write whole numbers to 10,000.	1/2**	
1.2 Compare and order whole numbers to 10,000.	1	
1.3* Identify the place value for each digit in numbers to 10,000.	3	
1.4 Round off numbers to 10,000 to the nearest ten, hundred, and thousand.	1/2**	
1.5* Use expanded notation to represent numbers.	3	
2.1* Find the sum or difference of two whole numbers between 0 and 10,000.	4	
2.3* Use the inverse relationship of multiplication and division to compute and check results.	3	
2.4* Solve simple problems involving multiplication of multidigit numbers by one-digit numbers.	5	
2.5 Solve division problems in which a multidigit number is evenly divided by a one-digit number.	1	
2.6 Understand the special properties of 0 and 1 in multiplication and division.	1	
2.7 Determine the unit cost when given the total cost and number of units.	1	
2.8 Solve problems that require two or more of the skills mentioned above.	1	
3.1 Compare fractions represented by drawings or concrete materials to show equivalency and to add and subtract simple fractions in context.	1	
3.2* Add and subtract simple fractions.	2	
3.3* Solve problems involving addition, subtraction, multiplication, and division of money amounts in decimal notation and multiply and divide money amounts in decimal notation by using whole-number multipliers and divisors.	4	
3.4 Know and understand that fractions and decimals are two different representations of the same concept.	1	
Algebra and Functions	12	18%
1.1* Represent relationships of quantities in the form of mathematical expressions, equations, or inequalities.	4	
1.2 Solve problems involving numeric equations or inequalities.	1	
1.3 Select appropriate operational and relational symbols to make an expression true.	1	
1.4 Express simple unit conversions in symbolic form.	1	
1.5 Recognize and use the commutative and associative properties of multiplication.	1	
2.1* Solve simple problems involving a functional relationship between two quantities.	3	
2.2 Extend and recognize a linear pattern by its rules.	1	
Measurement and Geometry	16	25%
1.1 Choose the appropriate tools and units and estimate and measure the length, liquid volume, and weight/mass of given objects.	1	
1.2* Estimate or determine the area and volume of solid figures by covering them with squares or by counting the number of cubes that would fill them.	3	
1.3* Find the perimeter of a polygon with integer sides.	3	
1.4 Carry out simple unit conversions within a system of measurement.	1	
2.1* Identify, describe, and classify polygons.	2	
2.2* Identify attributes of triangles.	2	
2.3* Identify attributes of quadrilaterals.	2	
2.4 Identify right angles in geometric figures or in appropriate objects and determine whether other angles are greater or less than a right angle.	2/3**	
2.5 Identify, describe, and classify common three-dimensional geometric objects.	2/3**	
2.6 Identify common solid objects that are the components needed to make a more complex solid object.	2/3**	
Statistics, Data Analysis, and Probability	5	8%
1.1 Identify whether common events are certain, likely, unlikely, or improbable.	1	
1.2* Record the possible outcomes for a simple event and systematically keep track of the outcomes when the event is repeated many times.	2	
1.3* Summarize and display the results of probability experiments in a clear and organized way.	2	
GRADE 3 TOTAL	65	100%

\* Key standards

\*\* Fractional values indicate rotated standards

NOTE: Non-assessed or embedded standards are omitted.

**Assessment FOR Learning  
LAUSD Periodic Assessments:**

Provide formative, ongoing data which can be used to increase student achievement

**QUARTER 1 ASSESSMENT**

GRADE 3 MATHEMATICS STANDARDS	# of Items
Number Sense	17
1.2 Compare and order whole numbers to 10,000.	2
1.3* Identify the place value for each digit in numbers to 10,000.	4
1.4 Round off numbers to 10,000 to the nearest ten, hundred, and thousand.	2
1.5* Use expanded notation to represent numbers.	4
2.1* Find the sum or difference of two whole numbers between 0 and 10,000.	5
Algebra and Functions	5
1.2 Solve problems involving numeric equations or inequalities.	2
2.1* Solve simple problems involving a functional relationship...	3
Measurement and Geometry	9
2.1* Identify, describe, and classify polygons.	3
2.2* Identify attributes of triangles.	3
2.3* Identify attributes of quadrilaterals.	3

**QUARTER 2 ASSESSMENT**

GRADE 3 MATHEMATICS STANDARDS	# of Items
Number Sense	15
2.1* Find the sum or difference of two whole numbers between 0 and 10,000.	2
2.2 Memorize to automaticity the multiplication table for numbers between 1 and 10	1
2.3* Use the inverse relationship of multiplication and division to compute and check results.	3
2.4* Solve simple problems involving multiplication of multidigit numbers by one-digit numbers.	4
2.8 Solve problems that require two or more of the skills mentioned above	1
3.1 Compare fractions represented by drawings or concrete materials to show equivalency and to add and...	2
3.2* Add and subtract simple fractions.	2
Algebra and Functions	16
1.1* Represent relationships of quantities in the form of mathematical expressions, equations, or inequalities.	4
1.3 Select appropriate operational and relational symbols to make an expression true.	3
1.5 Recognize and use the commutative and associative properties of multiplication.	2
2.1* Solve simple problems involving a functional relationship between two quantities.	4
2.2 Extend and recognize a linear pattern by its rules.	3

**QUARTER 3 ASSESSMENT**

GRADE 3 MATHEMATICS STANDARDS	# of Items
Number Sense	14
2.3* Use the inverse relationship of multiplication and division to compute and check results.	4
2.5 Solve division problems in which a multidigit number is evenly divided by a one-digit number.	3
2.8 Solve problems that require two or more of the skills mentioned above.	3
3.3* Solve problems involving addition, subtraction, multiplication, and division ...	4
Algebra and Functions	2
2.1* Solve simple problems involving a functional relationship...	2
Measurement and Geometry	11
1.1 Choose the appropriate tools and units and estimate and measure the length, liquid volume, and weight/mass ...	3
1.2* Estimate or determine the area and volume of solid figures by covering them with squares or by counting...	3
1.3* Find the perimeter of a polygon with integer sides.	3
2.3* Identify attributes of quadrilaterals.	2
Statistics, Data Analysis, and Probability	4
1.2* Record the possible outcomes for a simple event and systematically keep track of the outcomes when ...	2
1.3* Summarize and display the results of probability ...	2

NOTE: Unshaded standards are not separately assessed on the CST.

**TO BE REVISED FOR SCHOOL YEAR 2011-2012**

Los Angeles Unified School District

**Mathematics Grade 4**

**Assessment OF Learning  
California Standards Tests:**

Provide summative, end-of-year or end-of-course results  
that document student achievement

GRADE 4 MATHEMATICS STANDARDS	# of Items	%
<b>Number Sense</b>	31	48%
1.1* Read and write whole numbers in the millions.	3	
1.2* Order and compare whole numbers and decimals to two decimal places.	2	
1.3* Round whole numbers through the millions to the nearest ten, hundred, thousand, ten thousand, or hundred thousand.	2	
1.5 Explain different interpretations of fractions, for example, parts of a whole, parts of a set, and division of whole numbers by whole numbers; explain equivalents of fractions.	1/2**	
1.6 Write tenths and hundredths in decimal and fraction notations, and know the fraction and decimal equivalents for halves and fourths.	1/2**	
1.7 Write the fraction represented by a drawing of parts of a figure; represent a given fraction by using drawings; and relate a fraction to a simple decimal on a number line.	1	
1.8* Use concepts of negative numbers.	3	
1.9* Identify on a number line the relative position of positive fractions, positive mixed numbers, and positive decimals to two decimal places.	3	
2.1 Estimate and compute the sum or difference of whole numbers and positive decimals to two places.	1	
2.2 Round two-place decimals to one decimal or the nearest whole number and judge the reasonableness of the rounded answer.	1/2**	
3.1* Demonstrate an understanding of, and the ability to use, standard algorithms for the addition and subtraction of multidigit numbers.	3	
3.2* Demonstrate an understanding of, and the ability to use, standard algorithms for multiplying a multidigit number by a two-digit number and for dividing a multidigit number by a one-digit number; use relationships between them to simplify computations and to check results.	3	
3.3* Solve problems involving multiplication of multidigit numbers by two-digit numbers.	3	
3.4* Solve problems involving division of multidigit numbers by one-digit numbers.	3	
4.1 Understand that many whole numbers break down in different ways.	1/2**	
4.2* Know that numbers such as 2, 3, 5, 7, and 11 do not have any factors except 1 and themselves and that such numbers are called prime numbers.	2	
<b>Algebra and Functions</b>	18	28%
1.1 Use letters, boxes, or other symbols to stand for any number in simple expressions or equations.	1	
1.2* Interpret and evaluate mathematical expressions that now use parentheses.	5	
1.3* Use parentheses to indicate which operation to perform first when writing expressions containing more than two terms and different operations.	3	
1.4 Use and interpret formulas to answer questions about quantities and their relationships.	1	
1.5* Understand that an equation such as $y = 3x + 5$ is a prescription for determining a second number when a first number is given.	2	
2.1* Know and understand that equals added to equals are equal.	3	
2.2* Know and understand that equals multiplied by equals are equal.	3	
<b>Measurement and Geometry</b>	12	18%
1.1 Measure the area of rectangular shapes by using appropriate units such as square centimeter (cm <sup>2</sup> ), square meter (m <sup>2</sup> ), square kilometer (km <sup>2</sup> ), square inch (in <sup>2</sup> ), square yard (yd <sup>2</sup> ), or square mile (mi <sup>2</sup> ).	1/2**	
1.2 Recognize that rectangles that have the same area can have different perimeters.	1/2**	
1.3 Understand that rectangles that have the same perimeter can have different areas.	1/2**	
1.4 Understand and use formulas to solve problems involving perimeters and areas of rectangles and squares. Use those formulas to find the areas of more complex figures by dividing the figures into basic shapes.	1/2**	
2.1* Draw the points corresponding to linear relationships on graph paper.	2	
2.2* Understand that the length of a horizontal line segment equals the difference of the x-coordinates.	2	
2.3* Understand that the length of a vertical line segment equals the difference of the y-coordinates.	2	
3.1 Identify lines that are parallel and perpendicular.	1	
3.2 Identify the radius and diameter of a circle.	1	
3.3 Identify congruent figures.	1/3**	
3.4 Identify figures that have bilateral and rotational symmetry.	1/3**	
3.5 Know the definitions of a right angle, an acute angle, and an obtuse angle. Understand that 90°, 180°, 270°, and 360° are associated, respectively with , and full turns.	1/3**	
3.6 Visualize, describe, and make models of geometric solids in terms of the number and shape of faces, edges, and vertices; interpret two-dimensional representations of three-dimensional objects; and draw patterns (of faces) for a solid that, when cut and folded, will make a model of the solid.	1/3**	
3.7 Know the definitions of different triangles and identify their attributes.	1/3**	
3.8 Know the definition of different quadrilaterals.	1/3**	
<b>Statistics, Data Analysis, and Probability</b>	4	6%
1.1 Formulate survey questions; systematically collect and represent data on a number line, and coordinate graphs, tables, and charts.	1	
1.2 Identify the mode(s) for sets of categorical data and the mode(s), median, and any apparent outliers for numerical data sets.	2/3**	
1.3 Interpret one- and two-variable data graphs to answer questions about a situation.	1	
2.1 Represent all possible outcomes for a simple probability situation in an organized way.	2/3**	
2.2 Express outcomes of experimental probability situations verbally and numerically.	2/3**	
<b>GRADE 4 TOTAL</b>	65	100%

\* Key standards

\*\* Fractional values indicate rotated standards

NOTE: Non-assessed or embedded standards are omitted.

**Assessment FOR Learning  
LAUSD Periodic Assessments:**

Provide formative, ongoing data which can be used to  
increase student achievement

**QUARTER 1 ASSESSMENT**

GRADE 4 MATHEMATICS STANDARDS	# of Items
<b>Number Sense</b>	23
1.1* Read and write whole numbers in the millions.	3
1.2* Order and compare whole numbers and decimals to two decimal places.	3
1.3* Round whole numbers through the millions to the nearest ten, hundred, thousand, ten thousand, or hundred thousand.	3
1.4 Decide when a rounded solution is called for and explain why such a solution may be appropriate	1
2.1 Estimate and compute the sum or difference of whole numbers and positive decimals to two places.	3
3.1* Demonstrate an understanding of, and the ability to use, standard algorithms for the addition and subtraction of multidigit numbers.	3
3.2* Demonstrate an understanding of, and the ability to use, standard algorithms for multiplying a multidigit number by a two-digit...	4
3.3* Solve problems involving multiplication of multidigit numbers by two-digit numbers.	3
<b>Algebra and Functions</b>	8
1.1 Use letters, boxes, or other symbols to stand for any number in simple expressions or equations.	2
1.2* Interpret and evaluate mathematical expressions that now use parentheses.	3
1.3* Use parentheses to indicate which operation to perform first when writing expressions containing more than two terms and different operations.	3

**QUARTER 2 ASSESSMENT**

GRADE 4 MATHEMATICS STANDARDS	# of Items
<b>Number Sense</b>	21
1.2* Order and compare whole numbers and decimals to two decimal places.	2
1.5 Explain different interpretations of fractions, for example, parts of a whole, parts of a set, and division of whole numbers by...	2
1.6 Write tenths and hundredths in decimal and fraction notations, and know the fraction and decimal equivalents for halves and fourths.	2
1.7 Write the fraction represented by a drawing of parts of a figure; represent a given fraction by using drawings; and relate...	2
1.9* Identify on a number line the relative position of positive fractions, positive mixed numbers, and positive decimals to two...	4
3.2* Demonstrate an understanding of, and the ability to use, standard algorithms for multiplying a multidigit number by a two-digit...	3
3.4* Solve problems involving division of multidigit numbers by one-digit numbers.	3
4.1 Understand that many whole numbers break down in different ways	1
4.2* Know that numbers such as 2, 3, 5, 7, and 11 do not have any factors except 1 and themselves and that such numbers are called prime numbers.	2
<b>Measurement and Geometry</b>	9
3.1 Identify lines that are parallel and perpendicular.	1
3.5 Know the definitions of a right angle, an acute angle, and an obtuse angle. Understand that 90°, 180°, 270°, and 360° are...	2
3.6 Visualize, describe, and make models of geometric solids in terms of the number and shape of faces, edges, and vertices...	2
3.7 Know the definitions of different triangles and identify their attributes.	2
3.8 Know the definition of different quadrilaterals.	2

**QUARTER 3 ASSESSMENT**

GRADE 4 MATHEMATICS STANDARDS	# of Items
<b>Number Sense</b>	5
1.8* Use concepts of negative numbers.	3
3.1* Demonstrate an understanding of, and the ability to use, standard algorithms for the addition and subtraction of multidigit numbers.	2
<b>Algebra and Functions</b>	12
1.1 Use letters, boxes, or other symbols to stand for any number in simple expressions or equations.	2
1.4 Use and interpret formulas to answer questions about quantities and their relationships.	2
1.5* Understand that an equation such as $y = 3x + 5$ is a prescription for determining a second number when a first number is given.	2
2.1* Know and understand that equals added to equals are equal.	3
2.2* Know and understand that equals multiplied by equals are equal.	3
<b>Measurement and Geometry</b>	10
1.1 Measure the area of rectangular shapes by using appropriate units such as square centimeter (cm <sup>2</sup> ), square meter (m <sup>2</sup> )...	3
1.2 Recognize that rectangles that have the same area can have different perimeters.	1
2.1* Draw the points corresponding to linear relationships on graph paper.	2
2.2* Understand that the length of a horizontal line segment equals the difference of the x-coordinates.	2
2.3* Understand that the length of a vertical line segment equals the difference of the y-coordinates.	2
<b>Statistics, Data Analysis, and Probability</b>	4
1.2 Identify the mode(s) for sets of categorical data and the mode(s), median, and any apparent outliers for numerical data sets.	2
1.3 Interpret one- and two-variable data graphs to answer questions about a situation.	2

NOTE: Unshaded standards are not separately assessed on the CST.

Los Angeles Unified School District  
**Mathematics Grade 5**

**Assessment OF Learning  
California Standards Tests:**

Provide summative, end-of-year or end-of-course results that document student achievement

GRADE 5 MATHEMATICS STANDARDS		# of Items	%
Number Sense		29	45%
1.1	Estimate, round, and manipulate very large and very small numbers.	1	
1.2*	Interpret percents as a part of a hundred; find decimal and percent equivalents for common fractions and explain why they represent the same value; compute a given percent of a whole number.	5	
1.3	Understand and compute positive integer powers of nonnegative integers; compute examples as repeated multiplication.	1	
1.4*	Determine the prime factors of all numbers through 50 and write the numbers as the product of their prime factors by using exponents to show multiples of a factor.	3	
1.5*	Identify and represent on a number line decimals, fractions, mixed numbers, and positive and negative integers.	2	
2.1*	Add, subtract, multiply, and divide with decimals; add with negative integers; subtract positive integers from negative integers; and verify the reasonableness of the results.	7	
2.2*	Demonstrate proficiency with division, including division with positive decimals and long division with multidigit divisors.	3	
2.3*	Solve simple problems, including ones arising in concrete situations, involving the addition and subtraction of fractions and mixed numbers, and express answers in the simplest form.	5	
2.4	Understand the concept of multiplication and division of fractions.	1	
2.5	Compute and perform simple multiplication and division of fractions and apply these procedures to solving problems.	1	
Algebra and Functions		17	26%
1.1	Use information taken from a graph or equation to answer questions about a problem situation.	1	
1.2*	Use a letter to represent an unknown number; write and evaluate simple algebraic expressions in one variable by substitution.	6	
1.3	Know and use the distributive property in equations and expressions with variables.	1	
1.4*	Identify and graph ordered pairs in the four quadrants of the coordinate plane.	4	
1.5*	Solve problems involving linear functions with integer values; write the equation; and graph the resulting ordered pairs of integers on a grid.	5	
Measurement and Geometry		15	23%
1.1*	Derive and use the formula for the area of a triangle and of a parallelogram by comparing it with the formula for the area of a rectangle.	2 1/2**	
1.2*	Construct a cube and rectangular box from two-dimensional patterns and use these patterns to compute the surface area for these objects.	1/2**	
1.3*	Understand the concept of volume and use the appropriate units in common measuring systems to compute the volume of rectangular solids.	3	
1.4	Differentiate between and use appropriate units of measures for, two- and three- dimensional.	1	
2.1*	Measure, identify, and draw angles, perpendicular and parallel lines, rectangles, and triangles by using appropriate tools.	3	
2.2*	Know that the sum of the angles of any triangle is 180° and the sum of the angles of any quadrilateral is 360° and use this information to solve problems.	4	
2.3	Visualize and draw two-dimensional views of three-dimensional objects made from rectangular solids.	1	
Statistics, Data Analysis, and Probability		4	6%
1.1	Know the concepts of mean, median, and mode; compute and compare simple examples to show that they may differ.	1/3**	
1.2	Organize and display single-variable data in appropriate graphs and representations and explain which types of graphs are appropriate for various data sets.	1/3**	
1.3	Use fractions and percentages to compare data sets of different sizes.	1/3**	
1.4*	Identify ordered pairs of data from a graph and interpret the meaning of the data in terms of the situation depicted by the graph.	2 1/2**	
1.5*	Know how to write ordered pairs correctly.	1/2**	
GRADE 5 TOTAL		65	100%

\* Key standards

\*\* Fractional values indicate rotated standards

**Assessment FOR Learning  
LAUSD Periodic Assessments:**

Provide formative, ongoing data which can be used to increase student achievement

**QUARTER 1 ASSESSMENT**

GRADE 5 MATHEMATICS STANDARDS		# of Items
Number Sense		23
1.1	Estimate, round, and manipulate very large and very small numbers.	4
1.3	Understand and compute positive integer powers of nonnegative integers; compute examples...	4
2.1*	Add, subtract, multiply, and divide with decimals; add with negative integers; subtract positive integers...	10
2.2*	Demonstrate proficiency with division, including division with positive decimals and long division...	5
Algebra and Functions		8
1.2*	Use a letter to represent an unknown number; write and evaluate simple algebraic expressions...	7
1.3	Know and use the distributive property in equations and expressions with variables.	1

**QUARTER 2 ASSESSMENT**

GRADE 5 MATHEMATICS STANDARDS		# of Items
Number Sense		17
1.1	Estimate, round, and manipulate very large and very small numbers.	1
1.4*	Determine the prime factors of all numbers through 50 and write the numbers as the product of their...	3
1.5*	Identify and represent on a number line decimals, fractions, mixed numbers, and positive and negative integers.	3
2.3*	Solve simple problems, including ones arising in concrete situations, involving the addition...	6
2.4	Understand the concept of multiplication and division of fractions.	2
2.5	Compute and perform simple multiplication and division of fractions and apply these...	2
Algebra and Functions		2
1.1	Use information taken from a graph or equation to answer questions about a problem situation.	2
Measurement and Geometry		12
1.1*	Derive and use the formula for the area of a triangle and of a parallelogram by comparing it with...	3
1.4	Differentiate between and use appropriate units o	2
2.1*	Measure, identify, and draw angles, perpendicular and parallel lines, rectangles, and triangles by...	3
2.2*	Know that the sum of the angles of any triangle is 180° and the sum of the angles of any quadrilateral...	4

**QUARTER 3 ASSESSMENT**

GRADE 5 MATHEMATICS STANDARDS		# of Items
Number Sense		9
1.2*	Interpret percents as a part of a hundred; find decimal and percent equivalents for common fractions	4
1.5*	Identify and represent on a number line decimals, fractions, mixed numbers, and positive and negative integers.	2
2.1*	Add, subtract, multiply, and divide with decimals; add with negative integers; subtract positive integers...	3
Algebra and Functions		9
1.2*	Use a letter to represent an unknown number; write and evaluate simple algebraic expressions...	3
1.4*	Identify and graph ordered pairs in the four quadrants of the coordinate plane.	2
1.5*	Solve problems involving linear functions with integer values; write the equation; and graph the...	4
Measurement and Geometry		8
1.2*	Construct a cube and rectangular box from two-dimensional patterns and use these patterns to compute the surface area for these objects.	3
1.3*	Understand the concept of volume and use the appropriate units in common measuring systems to compute the volume of rectangular solids.	3
2.1*	Measure, identify, and draw angles, perpendicular and parallel lines, rectangles, and triangles by using appropriate tools.	2
Statistics, Data Analysis, and Probability		5
1.4*	Identify ordered pairs of data from a graph and interpret the meaning of the data in terms of the situation depicted by the graph.	2
1.5*	Know how to write ordered pairs correctly.	3

NOTE: Non-assessed or embedded standards are omitted.

Los Angeles Unified School District  
**Mathematics Grade 6**

**Assessment OF Learning  
California Standards Tests:**

Provide summative, end-of-year or end-of-course results that document student achievement

GRADE 6 MATHEMATICS STANDARDS	# of Items	%
Number Sense	25	39%
1.1* Compare and order positive and negative fractions, decimals, and mixed numbers and place them on a number line.	3	
1.2* Interpret and use ratios in different to show the relative sizes of two quantities, using appropriate.	1	
1.3* Use proportions to solve problems. Use cross-multiplication as a method for solving such problems, understanding it as the multiplication of both sides of an equation by a multiplicative inverse.	6	
1.4* Calculate given percentages of quantities and solve problems involving discounts at sales, interest earned, and tips.	5	
2.1 Solve problems involving addition, subtraction, multiplication, and division of positive fractions and explain why a particular operation was used for a given situation.	1/2**	
2.2 Explain the meaning of multiplication and division of positive fractions and perform the calculations.	1/2**	
2.3* Solve addition, subtraction, multiplication, and division problems, including those arising in concrete situations, that use positive and negative integers and combinations of these operations.	6	
2.4* Determine the least common multiple and the greatest common divisor of whole numbers; use them to solve problems with fractions.	3	
Algebra and Functions	19	29%
1.1* Write and solve one-step linear equations in one variable.	6	
1.2 Write and evaluate an algebraic expression for a given situation, using up to three variables.	1	
1.3 Apply algebraic order of operations and the commutative, associative, and distributive properties to evaluate expressions; and justify each step in the process.	1	
1.4 Solve problems manually by using the correct order of operations or by using a scientific calculator.	1	
2.1 Convert one unit of measurement to another.	1	
2.2* Demonstrate an understanding that rate is a measure of one quantity per unit value of another quantity.	6	
2.3 Solve problems involving rates, average speed, distance, and time.	1	
3.1 Use variables in expressions describing geometric quantities.	1	
3.2 Express in symbolic form simple relationships arising from geometry.	1	
Measurement and Geometry	10	15%
1.1* Understand the concept of a constant such as $\pi$ ; know the formulas for the circumference and area of a circle.	3	
1.2 Know common estimates of $\pi$ (3.14; 22/7) and use these values to estimate and calculate the circumference and the area of circles; compare with actual measurements.	1/2**	
1.3 Know and use the formulas for the volume of triangular prisms and cylinders; compare these formulas and explain the similarity between them and the formula for the volume of a rectangular solid.	1/2**	
2.1 Identify angles as vertical, adjacent, complementary, or supplementary and provide descriptions of these terms.	1	
2.2* Use the properties of complementary and supplementary angles and the sum of the angles of a triangle to solve problems involving an unknown angle.	4	
2.3 Draw quadrilaterals and triangles from given information about.	1	
Statistics, Data Analysis, and Probability	11	17%
1.1 Compute the range, mean, median, and mode of data sets.	1/3**	
1.2 Understand how additional data added to data sets may affect these computations of measures of central tendency.	1/3**	
1.3 Understand how the inclusion or exclusion of outliers affect measures of central tendency.	1/3**	
2.2* Identify different ways of selecting a sample and which method makes a sample more representative for a population.	3	
2.5* Identify claims based on statistical data and, in simple cases, evaluate the validity of the claims.	1/3**	
3.1* Represent all possible outcomes for compound events in an organized way and express the theoretical probability of each outcome.	3	
3.3* Represent probabilities as ratios, proportions, decimals between 0 and 1, and percentages between 0 and 100 and verify that the probabilities computed are reasonable; know that if P is the probability of an event, 1 - P is the probability of an event not occurring.	3	
3.4 Understand that the probability of either of two disjoint events occurring is the sum of the two individual probabilities and that the probability of one event following another, in independent trials, is the product of the two probabilities.	1/3**	
3.5* Understand the difference between independent and dependent events.	1/3**	
Grade 6 Total	65	100%

\* Key standards

\*\* Fractional values indicate rotated standards

NOTE: Non-assessed or embedded standards are omitted.

**Assessment FOR Learning  
LAUSD Periodic Assessments:**

Provide formative, ongoing data which can be used to increase student achievement

**PERIODIC ASSESSMENT #1**

GRADE 6 MATHEMATICS STANDARDS	# of Items
Number Sense	14
1.1* Compare and order positive and negative fractions, decimals, and mixed numbers and place them on a number line.	5
2.1 Solve problems involving addition, subtraction, multiplication, and division of positive fractions and explain why a particular operation was used for a given situation.	2
2.2 Explain the meaning of multiplication and division of positive fractions and perform the calculations.	2
2.4* Determine the least common multiple and the greatest common divisor of whole numbers; use them to solve problems with fractions.	5
Algebra and Functions	6
1.2 Write and evaluate an algebraic expression for a given situation, using up to three variables.	2
1.3 Apply algebraic order of operations and the commutative, associative, and distributive properties to evaluate expressions; and justify each step in the process.	2
1.4 Solve problems manually by using the correct order of operations or by using a scientific calculator.	2
MULTIPLE CHOICE ITEMS	20
CONSTRUCTED RESPONSE ITEM	4 pts
NS 1.5 Identify and represent on a number line decimals, fractions, mixed numbers, and positive and negative integers.	

**PERIODIC ASSESSMENT #2**

GRADE 6 MATHEMATICS STANDARDS	# of Items
Number Sense	9
1.2* Interpret and use ratios in different to show the relative sizes of two quantities, using appropriate.	1
1.3* Use proportions to solve problems. Use cross-multiplication as a method for solving such problems, understanding...	5
2.3* Solve addition, subtraction, multiplication, and division problems, including those arising in concrete situations...	3
Algebra and Functions	11
1.1* Write and solve one-step linear equations in one variable.	4
2.1 Convert one unit of measurement to another.	1
2.2* Demonstrate an understanding that rate is a measure of one quantity per unit value of another quantity.	5
2.3 Solve problems involving rates, average speed, distance, and time.	1
MULTIPLE CHOICE ITEMS	20
CONSTRUCTED RESPONSE ITEM	4 pts
NS 1.3* Use proportions to solve problems. Use cross-multiplication as a method for solving such problems, understanding it as the multiplication of both sides of an equation by a multiplicative inverse.	

**PERIODIC ASSESSMENT #3**

GRADE 6 MATHEMATICS STANDARDS	# of Items
Number Sense	5
1.4* Calculate given percentages of quantities and solve problems involving discounts at sales, interest earned, and tips.	5
Statistics, Data Analysis, and Probability	15
1.1 Compute the range, mean, median, and mode of data sets.	1
2.2* Identify different ways of selecting a sample and which method makes a sample more representative for a population.	4
2.5* Identify claims based on statistical data and, in simple cases, evaluate the validity of the claims.	1
3.1* Represent all possible outcomes for compound events in an organized way and express the theoretical probability of each outcome.	4
3.3* Represent probabilities as ratios, proportions, decimals between 0 and 1, and percentages between 0 and 100 and verify that the probabilities computed are reasonable...	4
3.5* Understand the difference between independent and dependent events.	1
MULTIPLE CHOICE ITEMS	20
CONSTRUCTED RESPONSE ITEM	4 pts
SDAP 2.2* Identify different ways of selecting a sample and which method makes a sample more representative for a population.	

Los Angeles Unified School District  
**Mathematics Grade 6**

**Assessment OF Learning  
California Standards Tests:**

Provide summative, end-of-year or end-of-course results that document student achievement

GRADE 6 MATHEMATICS STANDARDS	# of Items	%
Number Sense	25	39%
1.1* Compare and order positive and negative fractions, decimals, and mixed numbers and place them on a number line.	3	
1.2* Interpret and use ratios in different to show the relative sizes of two quantities, using appropriate.	1	
1.3* Use proportions to solve problems. Use cross-multiplication as a method for solving such problems, understanding it as the multiplication of both sides of an equation by a multiplicative inverse.	6	
1.4* Calculate given percentages of quantities and solve problems involving discounts at sales, interest earned, and tips.	5	
2.1 Solve problems involving addition, subtraction, multiplication, and division of positive fractions and explain why a particular operation was used for a given situation.	1/2**	
2.2 Explain the meaning of multiplication and division of positive fractions and perform the calculations.	1/2**	
2.3* Solve addition, subtraction, multiplication, and division problems, including those arising in concrete situations, that use positive and negative integers and combinations of these operations.	6	
2.4* Determine the least common multiple and the greatest common divisor of whole numbers; use them to solve problems with fractions.	3	
Algebra and Functions	19	29%
1.1* Write and solve one-step linear equations in one variable.	6	
1.2 Write and evaluate an algebraic expression for a given situation, using up to three variables.	1	
1.3 Apply algebraic order of operations and the commutative, associative, and distributive properties to evaluate expressions; and justify each step in the process.	1	
1.4 Solve problems manually by using the correct order of operations or by using a scientific calculator.	1	
2.1 Convert one unit of measurement to another.	1	
2.2* Demonstrate an understanding that rate is a measure of one quantity per unit value of another quantity.	6	
2.3 Solve problems involving rates, average speed, distance, and time.	1	
3.1 Use variables in expressions describing geometric quantities.	1	
3.2 Express in symbolic form simple relationships arising from geometry.	1	
Measurement and Geometry	10	15%
1.1* Understand the concept of a constant such as $\pi$ ; know the formulas for the circumference and area of a circle.	3	
1.2 Know common estimates of $\pi$ (3.14; 22/7) and use these values to estimate and calculate the circumference and the area of circles; compare with actual measurements.	1/2**	
1.3 Know and use the formulas for the volume of triangular prisms and cylinders; compare these formulas and explain the similarity between them and the formula for the volume of a rectangular solid.	1/2**	
2.1 Identify angles as vertical, adjacent, complementary, or supplementary and provide descriptions of these terms.	1	
2.2* Use the properties of complementary and supplementary angles and the sum of the angles of a triangle to solve problems involving an unknown angle.	4	
2.3 Draw quadrilaterals and triangles from given information about.	1	
Statistics, Data Analysis, and Probability	11	17%
1.1 Compute the range, mean, median, and mode of data sets.	1/3**	
1.2 Understand how additional data added to data sets may affect these computations of measures of central tendency.	1/3**	
1.3 Understand how the inclusion or exclusion of outliers affect measures of central tendency.	1/3**	
2.2* Identify different ways of selecting a sample and which method makes a sample more representative for a population.	3	
2.5* Identify claims based on statistical data and, in simple cases, evaluate the validity of the claims.	1/3**	
3.1* Represent all possible outcomes for compound events in an organized way and express the theoretical probability of each outcome.	3	
3.3* Represent probabilities as ratios, proportions, decimals between 0 and 1, and percentages between 0 and 100 and verify that the probabilities computed are reasonable; know that if P is the probability of an event, 1 - P is the probability of an event not occurring.	3	
3.4 Understand that the probability of either of two disjoint events occurring is the sum of the two individual probabilities and that the probability of one event following another, in independent trials, is the product of the two probabilities.	1/3**	
3.5* Understand the difference between independent and dependent events.	1/3**	
Grade 6 Total	65	100%

\* Key standards

\*\* Fractional values indicate rotated standards

NOTE: Non-assessed or embedded standards are omitted.

**Assessment FOR Learning  
LAUSD Periodic Assessments:**

Provide formative, ongoing data which can be used to increase student achievement

**PERIODIC ASSESSMENT #1**

GRADE 6 MATHEMATICS STANDARDS	# of Items
Number Sense	14
1.1* Compare and order positive and negative fractions, decimals, and mixed numbers and place them on a number line.	5
2.1 Solve problems involving addition, subtraction, multiplication, and division of positive fractions and explain why a particular operation was used for a given situation.	2
2.2 Explain the meaning of multiplication and division of positive fractions and perform the calculations.	2
2.4* Determine the least common multiple and the greatest common divisor of whole numbers; use them to solve problems with fractions.	5
Algebra and Functions	6
1.2 Write and evaluate an algebraic expression for a given situation, using up to three variables.	2
1.3 Apply algebraic order of operations and the commutative, associative, and distributive properties to evaluate expressions; and justify each step in the process.	2
1.4 Solve problems manually by using the correct order of operations or by using a scientific calculator.	2
MULTIPLE CHOICE ITEMS	20
CONSTRUCTED RESPONSE ITEM	4 pts
NS 1.5 Identify and represent on a number line decimals, fractions, mixed numbers, and positive and negative integers.	

**PERIODIC ASSESSMENT #2**

GRADE 6 MATHEMATICS STANDARDS	# of Items
Number Sense	9
1.2* Interpret and use ratios in different to show the relative sizes of two quantities, using appropriate.	1
1.3* Use proportions to solve problems. Use cross-multiplication as a method for solving such problems, understanding...	5
2.3* Solve addition, subtraction, multiplication, and division problems, including those arising in concrete situations...	3
Algebra and Functions	11
1.1* Write and solve one-step linear equations in one variable.	4
2.1 Convert one unit of measurement to another.	1
2.2* Demonstrate an understanding that rate is a measure of one quantity per unit value of another quantity.	5
2.3 Solve problems involving rates, average speed, distance, and time.	1
MULTIPLE CHOICE ITEMS	20
CONSTRUCTED RESPONSE ITEM	4 pts
NS 1.3* Use proportions to solve problems. Use cross-multiplication as a method for solving such problems, understanding it as the multiplication of both sides of an equation by a multiplicative inverse.	

**PERIODIC ASSESSMENT #3**

GRADE 6 MATHEMATICS STANDARDS	# of Items
Number Sense	5
1.4* Calculate given percentages of quantities and solve problems involving discounts at sales, interest earned, and tips.	5
Statistics, Data Analysis, and Probability	15
1.1 Compute the range, mean, median, and mode of data sets.	1
2.2* Identify different ways of selecting a sample and which method makes a sample more representative for a population.	4
2.5* Identify claims based on statistical data and, in simple cases, evaluate the validity of the claims.	1
3.1* Represent all possible outcomes for compound events in an organized way and express the theoretical probability of each outcome.	4
3.3* Represent probabilities as ratios, proportions, decimals between 0 and 1, and percentages between 0 and 100 and verify that the probabilities computed are reasonable...	4
3.5* Understand the difference between independent and dependent events.	1
MULTIPLE CHOICE ITEMS	20
CONSTRUCTED RESPONSE ITEM	4 pts
SDAP 2.2* Identify different ways of selecting a sample and which method makes a sample more representative for a population.	

# Algebra Readiness

## Assessment OF Learning California Standards Tests:

Provide summative, end-of-year or end-of-course results that document student achievement

## Assessment FOR Learning LAUSD Periodic Assessments:

Provide formative, ongoing data which can be used to increase student achievement

CST GENERAL MATHEMATICS BLUEPRINT		
CALIFORNIA CONTENT STANDARDS: GRADE 7	# of Items	%
<b>Number Sense (NS)</b>	<b>24</b>	<b>37%</b>
1.1 Read, write, and compare rational numbers in scientific notation with approximate numbers using scientific notation.	1	
1.2* Add, subtract, multiply, and divide rational numbers and take positive rational numbers to whole-number powers.	4	
1.3 Convert fractions to decimals and percents and use these representations in estimations, computations, and applications.	4	
1.5* Know that every rational number is either a terminating or repeating decimal and be able to convert terminating decimals into reduced fractions.	2	
1.6 Calculate the percentage of increases and decreases of a quantity.	1	
1.7* Solve problems that involve discounts, markups, commissions, and profit and compute simple and compound interest.	2	
2.1 Understand negative whole-number exponents. Multiply and divide expressions involving exponents with a common base.	1	
2.2* Add and subtract fractions by using factoring to find common denominators.	4	
2.3* Multiply, divide, and simplify rational numbers by using exponent rules.	2	
2.4 Use the inverse relationship between raising to a power and extracting the root of a perfect square integer: for an integer that is not square...	1	
2.5* Understand the meaning of the absolute value of a number; interpret the absolute value as the distance of the number from zero on a...	2	
<b>Algebra and Functions (AF)</b>	<b>21</b>	<b>32%</b>
1.1 Use variables and appropriate operations to write an expression, an equation, an inequality, or a system of equations or inequalities that...	3	
1.2 Use the correct order of operations to evaluate algebraic expressions...	3	
1.3* Simplify numerical expressions by applying properties of rational numbers and justify the process used.	2	
1.5 Represent quantitative relationships graphically and interpret the meaning of a specific part of a graph in the situation represented by...	1	
2.1 Interpret positive whole-number powers as repeated multiplication and negative whole-number powers as repeated division or multiplication...	1	
2.2 Multiply and divide monomials; extend the process of taking powers and extracting roots to monomials when the latter results in a...	1	
3.1 Graph functions of the form $y = nx^2$ and $y = nx^3$ and use in solving problems.	1	
3.3* Graph linear functions, noting that the vertical change per unit of horizontal change is always the same and know that the ratio...	2	
3.4* Plot the values of quantities whose ratios are always the same. Fit a line to the plot and understand that the slope of the line equals the...	1	
4.1* Solve two-step linear equations and inequalities in one variable over the rational numbers, interpret the solution or solutions in the context...	4	
4.2* Solve multistep problems involving rate, average speed, distance, and time or a direct variation.	2	
<b>Measurement and Geometry (MG)</b>	<b>11</b>	<b>17%</b>
1.1 Compare weights, capacities, geometric measures, times, and temperatures within and between measurement systems...	1	
1.2 Construct and read drawings and models made to scale.	1	
1.3* Use measures expressed as rates and measures expressed as products to solve problems; check the units of the solutions; and use...	2	
2.1 Use formulas routinely for finding the perimeter and area of basic two-dimensional figures and the surface area and volume of basic three...	1	
2.2 Estimate and compute the area of more complex or irregular two- and three-dimensional figures by breaking the figures down into more...	1	
2.3 Compute the length of the perimeter, the surface area of the faces, and the volume of a three-dimensional object built from rectangular...	1/2**	
2.4 Relate the changes in measurement with a change of scale to the units used and to conversions between units.	1/2**	
3.2 Understand and use coordinate graphs to plot simple figures, determine lengths and areas related to them, and determine their...	1	
3.3* Know and understand the Pythagorean theorem and its converse and use it to find the length of the missing side of a right triangle and the...	3	
<b>CALIFORNIA CONTENT STANDARDS: GRADE 6</b>		
<b>Statistics, Data Analysis, and Probability (SDAP)</b>	<b>9</b>	<b>14%</b>
1.1 Compute the range, mean, median, and mode of data sets.	1	
2.5* Identify claims based on statistical data and, in simple cases, evaluate the validity of the claims.	1	
3.1* Represent all possible outcomes for compound events in an organized way and express the theoretical probability of each outcome.	1	
3.3* Represent probabilities as ratios, proportions, decimals between 0 and 1, and percentages between 0 and 100 and verify that the...	1	
3.5* Understand the difference between independent and dependent events.	1	
<b>CALIFORNIA CONTENT STANDARDS: GRADE 7</b>		
<b>Statistics, Data Analysis, and Probability (SDAP)</b>		
1.1 Know various forms of display for data sets, including a stem-and-leaf plot or box-and-whisker plot; use the forms to display a single set of...	1	
1.2 Represent two numerical variables on a scatterplot and informally describe how the data points are distributed and any apparent...	1	
1.3* Understand the meaning of, and be able to compute, the minimum, the lower quartile, the median, the upper quartile, and the maximum of a...	2	
<b>GENERAL MATHEMATICS TOTAL</b>	<b>65</b>	<b>100%</b>

\* Key standards (*Mathematics Framework for California Public Schools*, chapter 3)  
 \*\* Fractional values indicate rotated standards (e.g., 1/2 = rotated every two years; 1/3 = rotated every three years)  
 NOTE: Non-assessed or embedded standards are omitted.

## PERIODIC ASSESSMENT #1

ALGEBRA READINESS BLUEPRINT	# of Items
<b>Number Sense</b>	<b>14</b>
4 NS 1.7 Write the fraction represented by a drawing...	1
6 NS 2.2 Explain the meaning of multiplication...	2
6 NS 2.3* Solve addition, subtraction...problems...	1
6 NS 2.4* Determine the least common multiple and...	2
7 NS 1.2* Add, subtract, multiply, and divide rational...	5
7 NS 2.2* Add and subtract fractions by using factoring...	3
<b>Algebra and Functions</b>	<b>6</b>
6 AF 1.3 Apply algebraic order of operations and...	2
6 AF 1.4 Solve problems manually by using the correct...	1
7 AF 1.2 Use the correct order of operations to evaluate...	1
7 AF 1.3* Simplify numerical expressions by applying...	2
<b>MULTIPLE CHOICE ITEMS</b>	<b>20</b>
<b>CONSTRUCTED RESPONSE ITEM</b>	<b>4 pts</b>
NS 7.1.2* Add, subtract, multiply, and divide rational numbers (integers, fractions, and terminating decimals) and take positive rational numbers to whole-number powers.	

## PERIODIC ASSESSMENT #2

ALGEBRA READINESS BLUEPRINT	# of Items
<b>Number Sense</b>	<b>16</b>
4 NS 1.9* Identify on a number line the relative position...	1
5 NS 1.5 Identify and represent on a number line...	1
6 NS 1.2 Interpret and use ratios in different contexts...	2
7 NS 1.2* Add, subtract, multiply, and divide rational...	1
7 NS 1.3 Convert fractions to decimals and percents...	5
7 NS 1.6 Calculate the percentage of increases...	2
7 NS 1.7* Solve problems that involve discounts...	4
<b>Algebra and Functions</b>	<b>4</b>
7 AF 4.2* Solve multistep problems involving rate...	4
<b>MULTIPLE CHOICE ITEMS</b>	<b>20</b>
<b>CONSTRUCTED RESPONSE ITEM</b>	<b>4 pts</b>
7 AF 4.2* Solve multistep problems involving rate, average speed, distance, and time or a direct variation.	

## PERIODIC ASSESSMENT #3

ALGEBRA READINESS BLUEPRINT	# of Items
<b>Number Sense</b>	<b>6</b>
6 NS 1.1* Compare and order positive and negative fractions, decimals, and mixed numbers and place...	1
7 NS 1.1 Read, write, and compare rational numbers in scientific notation with approximate numbers using...	2
7 NS 1.2* Add, subtract, multiply, and divide rational numbers and take positive rational numbers to...	3
<b>Algebra and Functions</b>	<b>14</b>
7 AF 1.1 Use variables and appropriate operations to write an expression, an equation, an inequality, or...	2
7 AF 1.5 Represent quantitative relationships graphically and interpret the meaning of a specific part of a...	2
7 AF 3.3* Graph linear functions, noting that the vertical change per unit of horizontal change is always the...	2
7 AF 3.4* Plot the values of quantities whose ratios are always the same. Fit a line to the plot and understand that the slope of the line equals the...	2
7 AF 4.1* Solve two-step linear equations and inequalities in one variable over the rational numbers, interpret the solution or solutions in the context...	4
7 AF 4.2* Solve multistep problems involving rate, average speed, distance, and time or a direct variation.	2
<b>TOTAL MULTIPLE CHOICE ITEMS</b>	<b>20</b>
<b>CONSTRUCTED RESPONSE ITEM</b>	<b>4 pts</b>
7 AF 1.1 Use variables and appropriate operations to write an expression, an equation, an inequality, or a system of equations or inequalities that represents a verbal expression.	

\* Key Standards  
 NOTE: Unshaded standards are not assessed on the CST for General Mathematics.

**Los Angeles Unified School District**  
**Algebra 1 AB**

**Assessment OF Learning**  
**California Standards Tests:**

Provide summative, end-of-year or end-of-course results that document student achievement

CST BLUEPRINT FOR ALGEBRA 1 AB	# of Items	RC***
1.0 ...use properties of numbers to demonstrate whether assertions are true or false.	1/2**	
2.0* ...understand and use such operations as taking the opposite, finding the reciprocal, taking a root, and raising to a fractional power. They understand and use the rules of exponents.	4	RC1
3.0 ...solve equations and inequalities involving absolute values.	1	
4.0* ...simplify expressions prior to solving linear equations and inequalities in one variable.	3	
5.0* ...solve multistep problems, including word problems, involving linear equations and linear inequalities in one variable and provide justification for each step.	6	
6.0* ...graph a linear equation and compute the x- and y- intercepts. They are also able to sketch the region defined by linear inequality.	4	
7.0* ...verify that a point lies on a line, given an equation of the line. ...are able to derive linear equations using the point-slope formula.	4	RC2
8.0 ...understand the concepts of parallel lines and perpendicular lines and how those slopes are related. ...are able to find the equation of a line perpendicular to a given line that passes through a given point.	1	
9.0* ...solve a system of two linear equations in two variables algebraically and are able to interpret the answer graphically. ... are able to solve a system of two linear inequalities in two variables and to sketch the solution sets.	5	
10.0* ...add, subtract, multiply, and divide monomials and polynomials. ...solve multistep problems, including word problems, by using these techniques.	4	
11.0 ...apply basic factoring techniques to second-and simple third-degree polynomials. These techniques include finding a common factor for all terms in a polynomial, recognizing the difference of two squares, and recognizing perfect squares of binomials.	2	
12.0* ...simplify fractions with polynomials in the numerator and denominator by factoring both and reducing them to the lowest terms.	3	RC4
13.0* ...add, subtract, multiply, and divide rational expressions and functions. ...solve both computationally and conceptually challenging problems by using these techniques.	4	
14.0* ...solve a quadratic equation by factoring or completing the square.	3	RC3
15.0* ... apply algebraic techniques to solve rate problems, work problems, and percent mixture problems.	4	RC4
16.0...understand the concepts of a relation and a function, determine whether a given relation defines a function, and give pertinent information about given relations and functions.	1/2**	
17.0...determine the domain of independent variables and the range of dependent variables defined by a graph, a set of ordered pairs, or a symbolic expression.	1	
18.0...determine whether a relation defined by a graph, a set of ordered pairs, or a symbolic expression is a function and justify the conclusion.	1/2**	
19.0* ...know the quadratic formula and are familiar with its proof by completing the square.	2	
20.0* ...use the quadratic formula to find the roots of a second-degree polynomial and to solve quadratic equations.	3	RC3
21.0* ...graph quadratic functions and know that their roots are the x-intercepts.	3	
22.0...use the quadratic formula or factoring techniques or both to determine whether the graph of a quadratic function will intersect the x-axis in zero, one, or two points.	1	
23.0* ... apply quadratic equations to physical problems.	3	RC1
24.1 ...explain the difference between inductive and deductive reasoning and identify and provide examples of each.	1/3**	
24.2 ...identify the hypothesis and conclusion in logical deduction.	1/3**	
24.3 ...use counterexamples to show that an assertion is false and recognize that a single counterexample is sufficient to refute an assertion.	1/3**	
25.1 ...use properties of numbers to construct simple, valid arguments (direct and indirect) for, or formulate counterexamples to, claimed assertions.	1/2**	
25.2...judge the validity of an argument according to whether the properties of the real number system and the order of operations have been applied correctly at each step.	1/2**	
25.3...Given a specific algebraic statement involving linear, quadratic, or absolute value expressions or equations or inequalities, ...determine whether the statement is true sometimes, always, or never.	1/2**	
<b>ALGEBRA 1 AB TOTAL</b>	<b>65</b>	<b>100%</b>

\* Key standards comprise a minimum of 70% of the test  
 \*\* Assessed once every two or three years, as indicated  
 \*\*\*Standards are shaded according to CST Reporting Cluster (RC), where:  
 • RC1, Number Properties, represents 26% of the CST (17 questions)  
 • RC2, Graphing, represents 22% of the CST (14 questions)  
 • RC3, Quadratics, represents 32% of the CST (21 questions)  
 • RC4, Functions, represents 20% of the CST (13 questions)  
 NOTE: Non-assessed or embedded standards are omitted.

**Assessment FOR Learning**  
**LAUSD Periodic Assessments:**

Provide formative, ongoing data which can be used to increase student achievement

**PERIODIC ASSESSMENT #1**

ALGEBRA CONTENT STANDARDS	# of Items
1.0 ...use properties of numbers to demonstrate whether assertions are true or false.	1
2.0* ...understand and use such operations as taking the opposite, finding the reciprocal, taking a root, and raising to a fractional power. They understand and use the rules of exponents.	2
4.0* ...simplify expressions prior to solving linear equations and inequalities in one variable.	3
5.0* ...solve multistep problems, including word problems, involving linear equations and linear inequalities in one variable and provide justification for each step.	6
6.0* ...graph a linear equation and compute the x- and y- intercepts. They are also able to sketch the region defined by linear inequality.	2
7.0* ...verify that a point lies on a line, given an equation of the line...are able to derive linear equations using the point-slope formula.	1
16.0 ... understand the concepts of a relation and a function, determine whether a given relation defines a function, and give pertinent information about given relations and functions.	1
17.0 ... determine the domain of independent variables and the range of dependent variables defined by a graph, a set of ordered pairs, or a symbolic expression.	1
18.0 ...determine whether a relation defined by a graph, a set of ordered pairs, or a symbolic expression is a function and justify the conclusion.	1
24.3 ...use counterexamples to show that an assertion is false and recognize that a single counterexample is sufficient to refute an assertion.	1
25.3 ...Given a specific algebraic statement involving linear, quadratic, or absolute value expressions or equations or inequalities, ...determine whether the statement is true sometimes, always, or never.	1
<b>MULTIPLE CHOICE ITEMS</b>	<b>20</b>
<b>CONSTRUCTED RESPONSE ITEM</b>	<b>4 pts</b>
5.0* ...solve multistep problems, including word problems, involving linear equations and linear inequalities in one variable and provide justification for each step.	

**PERIODIC ASSESSMENT #2**

ALGEBRA CONTENT STANDARDS	# of Items
3.0 ...solve equations and inequalities involving absolute values.	2
4.0* ...simplify expressions prior to solving linear equations and inequalities in one variable.	1
5.0* ...solve multistep problems, including word problems, involving linear equations and linear inequalities in one variable and provide justification for each step.	3
6.0* ...graph a linear equation and compute the x- and y- intercepts. They are also able to sketch the region defined by linear inequality.	2
7.0* ...verify that a point lies on a line, given an equation of the line...are able to derive linear equations using the point-slope formula.	3
8.0 ...understand the concepts of parallel lines and perpendicular lines and how those slopes are related...are able to find the equation of a line perpendicular to a given line that passes through a given point.	2
9.0* ...solve a system of two linear equations in two variables algebraically and are able to interpret the answer graphically. ...are able to solve a system of two linear inequalities in two variables and to sketch the solution sets	5
15.0* ... apply algebraic techniques to solve rate problems, work problems, and percent mixture problems.	2
<b>MULTIPLE CHOICE ITEMS</b>	<b>20</b>
<b>CONSTRUCTED RESPONSE ITEM</b>	<b>4 pts</b>
6.0* ...graph a linear equation and compute the x- and y- intercepts. They are also able to sketch the region defined by linear inequality.	

**PERIODIC ASSESSMENT #3**

ALGEBRA CONTENT STANDARDS	# of Items
2.0* ...understand and use such operations as taking the opposite, finding the reciprocal, taking a root, and raising to a fractional power. They understand and use the rules of exponents.	2
10.0* ...add, subtract, multiply, and divide monomials and polynomials. ...solve multistep problems, including word problems, by using these techniques.	3
11.0 ...apply basic factoring techniques to second-and simple third-degree polynomials. These techniques include finding a common factor for all terms in a polynomial, recognizing the difference of two squares, and recognizing perfect squares of binomials.	2
14.0* ...solve a quadratic equation by factoring or completing the square.	2
19.0* ...know the quadratic formula and are familiar with its proof by completing the square	2
20.0* ...use the quadratic formula to find the roots of a second-degree polynomial and to solve quadratic equations.	3
21.0* ...graph quadratic functions and know that their roots are the x-intercepts.	3
22.0 ...use the quadratic formula or factoring techniques or both to determine whether the graph of a quadratic function will intersect the x-axis in zero, one, or two points.	1
23.0* ...apply quadratic equations to physical problems	2
<b>TOTAL MULTIPLE CHOICE ITEMS</b>	<b>20</b>
<b>CONSTRUCTED RESPONSE ITEM</b>	<b>4 pts</b>
23.0* ...apply quadratic equations to physical problems	

**Los Angeles Unified School District**  
**Geometry AB**

**Assessment OF Learning  
California Standards Tests:**

Provide summative, end-of-year or end-of-course results that document student achievement

CST BLUEPRINT FOR GEOMETRY AB	# of Items	RC***
1.0* ... demonstrate understanding by identifying and giving examples of undefined terms, axioms, theorems, and inductive and deductive reasoning.	2	RC1
2.0* ... write geometric proofs, including proofs by contradiction.	3	
3.0* ... construct and judge the validity of a logical argument and give counterexamples to disprove a statement.	4	
4.0* ... prove basic theorems involving congruence and similarity.	5	
5.0 ... prove that triangles are congruent or similar, and they are able to use the concept of corresponding parts of congruent triangles.	2	
6.0 ... know and are able to use the triangle inequality theorem.	1	
7.0* ... prove and use theorems involving the properties of parallel lines cut by a transversal, the properties of quadrilaterals, and the properties of circles.	5 2/3**	
8.0* ... know, derive, and solve problems involving the perimeter, circumference, area, volume, lateral area, and surface area of common geometric figures.	4	RC2
9.0 ... compute the volumes and surface areas of prisms, pyramids, cylinders, cones, and spheres; and students commit to memory the formulas for prisms, pyramids, and cylinders.	2	
10.0* ... compute areas of polygons, including rectangles, scalene triangles, equilateral triangles, rhombi, parallelograms, and trapezoids.	4	
11.0 ... determine how changes in dimensions affect the perimeter, area, and volume of common geometric figures and solids.	1	
12.0* ... find and use measures of sides and of interior and exterior angles of triangles and polygons to classify figures and solve problems.	5	RC3
13.0 ... prove relationships between angles in polygons by using properties of complementary, supplementary, vertical, and exterior angles.	2	
14.0* ... prove the Pythagorean theorem.	1/3**	
15.0 ... use the Pythagorean theorem to determine distance and find missing lengths of sides of right triangles.	2	
16.0* ... perform basic constructions with a straightedge and compass, such as angle bisectors, perpendicular bisectors, and the line parallel to a given line through a point off the line.	4	
17.0* ... prove theorems by using coordinate geometry, including the midpoint of a line segment, the distance formula, and various forms of equations of lines and circles.	3	
18.0* ... know the definitions of the basic trigonometric functions defined by the angles of a right triangle. They also know and are able to use elementary relationships between them. For example $\tan x = \sin x / \cos x$ , $\sin^2 x + \cos^2 x = 1$	3	
19.0* ... use trigonometric functions to solve for an unknown length of a side of a right triangle, given an angle and a length of a side.	3	RC4
20.0 ... know and are able to use angle and side relationships in problems with special right triangles, such as 30°, 60°, and 90° triangles and 45°, 45°, and 90° triangles.	1	
21.0* ... prove and solve problems regarding relationships among chords, secants, tangents, inscribed angles, and inscribed and circumscribed polygons of circles.	5	
22.0* ... know the effect of rigid motions on figures in the coordinate plane and space, including rotations, translations, and reflections.	3	
<b>GEOMETRY AB TOTAL</b>	<b>65</b>	<b>100%</b>

\* Key standards comprise a minimum of 70% of the test  
 \*\* Fractional values indicate rotated standards (e.g., 1/2 = rotated every two years; 1/3 = rotated every three years)  
 \*\*\*Standards are shaded according to CST Reporting Cluster (RC), where:  
 • RC1, Logic and Geometric Proofs, represents 35% of the CST (23 questions)  
 • RC2, Volume and Area Formulas, represents 17% of the CST (11 questions)  
 • RC3, Angle Relationships, Constructions, and Lines, represents 25% of the CST (16 questions)  
 • RC4, Trigonometry, represents 23% of the CST (15 questions)  
 NOTE: Non-assessed or embedded standards are omitted.

**Assessment FOR Learning  
LAUSD Periodic Assessments:**

Provide formative, ongoing data which can be used to increase student achievement

**PERIODIC ASSESSMENT #1**

GEOMETRY CONTENT STANDARDS	# of Items
1.0* ... demonstrate understanding by identifying and giving examples of undefined terms, axioms, theorems, and inductive and deductive reasoning.	2
2.0* ... write geometric proofs, including proofs by contradiction.	3
3.0* ... construct and judge the validity of a logical argument and give counterexamples to disprove a statement.	2
7.0* ... prove and use theorems involving the properties of parallel lines cut by a transversal, the properties of quadrilaterals, and the properties of circles.	3
12.0* ... find and use measures of sides and of interior and exterior angles of triangles and polygons to classify figures and solve problems.	5
13.0 ... prove relationships between angles in polygons by using properties of complementary, supplementary, vertical, and exterior angles.	2
16.0* ... perform basic constructions with a straightedge and compass, such as angle bisectors, perpendicular bisectors, and the line parallel to a given line through a point off the line.	2
17.0* ... prove theorems by using coordinate geometry, including the midpoint of a line segment, the distance formula, and various forms of equations of lines and circles.	1
<b>MULTIPLE CHOICE ITEMS</b>	<b>20</b>
<b>CONSTRUCTED RESPONSE ITEM</b>	<b>4 pts</b>
12.0* ... find and use measures of sides and of interior and exterior angles of triangles and polygons to classify figures and solve problems.	

**PERIODIC ASSESSMENT #2**

GEOMETRY CONTENT STANDARDS	# of Items
3.0* ... construct and judge the validity of a logical argument and give counterexamples to disprove a statement.	1
4.0* ... prove basic theorems involving congruence and similarity.	5
5.0 ... prove that triangles are congruent or similar, and they are able to use the concept of corresponding parts of congruent triangles.	3
6.0 ... know and are able to use the triangle inequality theorem.	1
7.0* ... prove and use theorems involving the properties of parallel lines cut by a transversal, the properties of quadrilaterals, and the properties of circles.	3
15.0 ... use the Pythagorean theorem to determine distance and find missing lengths of sides of right triangles.	2
16.0* ... perform basic constructions with a straightedge and compass, such as angle bisectors, perpendicular bisectors, and the line parallel to a given line through a point off the line.	2
17.0* ... prove theorems by using coordinate geometry, including the midpoint of a line segment, the distance formula, and various forms of equations of lines and circles.	3
<b>MULTIPLE CHOICE ITEMS</b>	<b>20</b>
<b>CONSTRUCTED RESPONSE ITEM</b>	<b>4 pts</b>
14.0* ... prove the Pythagorean theorem.	

**PERIODIC ASSESSMENT #3**

GEOMETRY CONTENT STANDARDS	# of Items
3.0* ... construct and judge the validity of a logical argument and give counterexamples to disprove a statement.	1
8.0* ... know, derive, and solve problems involving the perimeter, circumference, area, volume, lateral area, and surface area of common geometric figures.	4
9.0 ... compute the volumes and surface areas of prisms, pyramids, cylinders, cones, and spheres; and students commit to memory the formulas for prisms, pyramids, and cylinders.	2
10.0* ... compute areas of polygons, including rectangles, scalene triangles, equilateral triangles, rhombi, parallelograms, and trapezoids.	4
11.0 ... determine how changes in dimensions affect the perimeter, area, and volume of common geometric figures and solids.	1
18.0* ... know the definitions of the basic trigonometric functions defined by the angles of a right triangle. They also know and are able to use elementary relationships between them. For example $\tan x = \sin x / \cos x$ , $\sin^2 x + \cos^2 x = 1$	3
19.0* ... use trigonometric functions to solve for an unknown length of a side of a right triangle, given an angle and a length of a side.	3
20.0 ... know and are able to use angle and side relationships in problems with special right triangles, such as 30°, 60°, and 90° triangles and 45°, 45°, and 90° triangles.	2
<b>TOTAL MULTIPLE CHOICE ITEMS</b>	<b>20</b>
<b>CONSTRUCTED RESPONSE ITEM</b>	<b>4 pts</b>
11.0 ... determine how changes in dimensions affect the perimeter, area, and volume of common geometric figures and solids.	