CALIFORNIA STANDARDS TEST GRADE 5 MATHEMATICS

(Blueprint adopted by the California State Board of Education 10/02)

CALIFORNIA CONTENT STANDARDS: GRADE 5	# of Items	%
Number Sense	29	45%
Algebra and Functions	17	26%
Measurement and Geometry	15	23%
Statistics, Data Analysis, and Probability	4	6%
Mathematical Reasoning	Embedded	0%
Total	65	100%

CALIFORNIA CONTENT STANDARDS GRADE 5: By the end of grade five, students increase their facility with the four basic arithmetic operations applied to fractions, decimals, and positive and negative numbers. They know and use common measuring units to determine length and area and know and use formulas to determine the volume of simple geometric figures. Students know the concept of angle measurement and use a protractor and compass to solve problems. They use grids, tables, graphs, and charts to record and analyze data.	# of items
NS2.1* 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
AF1.2* Use a letter to represent an unknown number; write and evaluate simple algebraic expressions in one variable by substitution.	6
NS1.2* 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
NS2.3* Solve simple problems, including ones arising in concrete situations, involving the addition and subtraction of fractions and mixed numbers (like and unlike denominators of 20 or less), and express answers in the simplest form	5
AF1.5* Solve problems involving linear functions with integer values; write the equation; and graph the resulting ordered pairs of integers on a grid.	5
AF1.4* Identify and graph ordered pairs in the four quadrants of the coordinate plane.	4

*** Not assessable in a multiple-choice format

Embedded: Content of standard is embedded within items in other strands.

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^{*} Key standards (*Mathematics Framework for California Public Schools*, chapter 3) 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)

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MG2.2* Know that the sum of the angles of any triangle is 180° and the	
solve problems.	4
NS1.4* Determine the prime factors of all numbers through 50 and write the numbers as the product of their prime factors by using exponents to	
snow multiples of a factor (e.g., $24 = 2 \times 2 \times 2 \times 3 = 2^{\circ} \times 3$).	3
NS2.2* Demonstrate proficiency with division, including division with positive decimals and long division with multidigit divisors.	3
MG1.3* Understand the concept of volume and use the appropriate units in common measuring systems (i.e., cubic centimeter[cm ³], cubic meter[m ³], cubic inch[in ³], cubic yard[yd ³]) to compute the volume of rectangular solids.	3
MG2.1* Measure, identify, and draw angles, perpendicular and parallel lines, rectangles, and triangles by using appropriate tools (e.g., straightedge, ruler, compass, protractor, drawing software).	3
MG1.1* 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 (i.e., two of the same triangles make a parallelogram with twice the area; a parallelogram is compared with a rectangle of the same area by cutting	
and pasting a right triangle on the parallelogram).	2 1/2**
SDAP1.4* 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**
NS1.5* Identify and represent on a number line decimals, fractions, mixed numbers, and positive and negative integers.	2
NS1.1 Estimate, round, and manipulate very large (e.g., millions) and very small (e.g., thousandths) numbers.	1
NS1.3 Understand and compute positive integer powers of nonnegative integers; compute examples as repeated multiplication.	1
NS2.4 Understand the concept of multiplication and division of fractions.	1
NS2.5 Compute and perform simple multiplication and division of fractions and apply these procedures to solving problems	
	1
AF1.1 Use information taken from a graph or equation to answer questions about a problem situation.	1
AF1.1 Use information taken from a graph or equation to answer questions about a problem situation. AF1.3 Know and use the distributive property in equations and expressions with variables.	1 1 1

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MG2.3 Visualize and draw two-dimensional views of three- dimensional	
objects made from rectangular solids.	1
MG1.2* Construct a cube and rectangular box from two-dimensional	
patterns and use these patterns to compute the surface area for these	
objects.	1/2**
SDAP1.5* Know how to write ordered pairs correctly; for example, (x, y) .	1/2**
SDAP1.1 Know the concepts of mean, median, and mode; compute and	
compare simple examples to show that they may differ.	1/3**
SDAP1.2 Organize and display single-variable data in appropriate graphs	
and representations (e.g., histogram, circle graphs) and explain which	
types of graphs are appropriate for various data sets.	1/3**
SDAP1.3 Use fractions and percentages to compare data sets of different	
sizes.	1/3**
MR1.1 Analyze problems by identifying relationships, distinguishing	
relevant from irrelevant information, sequencing and prioritizing	
information, and observing patterns.	Embedded
MR1.2 Determine when and how to break a problem into simpler parts.	Embedded
MR2.1 Use estimation to verify the reasonableness of calculated results.	Embedded
MR2.2 Apply strategies and results from simpler problems to more	
complex problems.	Embedded
MR2.3 Use a variety of methods, such as words, numbers, symbols,	
charts, graphs, tables, diagrams, and models, to explain mathematical	
reasoning.	Embedded
MR2.4 Express the solution clearly and logically by using the appropriate	
mathematical notation and terms and clear language; support solutions	
with evidence in both verbal and symbolic work.	Embedded
MR2.5 Indicate the relative advantages of exact and approximate	
solutions to problems and give answers to a specified degree of accuracy.	Embedded
MR2.6 Make precise calculations and check the validity of the results from	
the context of the problem.	Embedded
MR3.1 Evaluate the reasonableness of the solution in the context of the	
original situation.	Embedded
MR3.2 Note the method of deriving the solution and demonstrate a	
conceptual understanding of the derivation by solving similar problems.	Embedded
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