# California Alternate Performance Assessment (CAPA) <br> Mathematics Blueprint <br> Level I: Grades 2-11 <br> (Blueprint adopted by the State Board of Education 3/06) 

## CALIFORNIA CONTENT STANDARDS

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| :---: | :---: | :---: | :---: |
| Number Sense: |  | Number of Tasks: Percentage of Test: | $\begin{aligned} & 3 \\ & 37.5 \% \end{aligned}$ |
| Kindergarten |  |  |  |
| 1.0* Students understand the relationship between numbers and quantities (i.e., that a set of objects has the same number of objects in different situations regardless of its position or arrangement): |  |  |  |
| 1.2 Count, recognize, represent, name, and order a number of objects (up to 30). <br> $\checkmark$ Indicate quantity of " 1 ". <br> $\checkmark$ Indicate quantities of more than 1. <br> $\checkmark$ Match printed numerals to same. |  |  |  |
| Grade 1 |  |  |  |
| 1.0 Students understand and use numbers up to 100: |  |  |  |
| 1.1* Count, read, and write whole numbers to 100. <br> $\checkmark$ Count whole numbers to 3 . |  |  |  |
| 2.0 Students demonstrate the meaning of addition and subtraction and use these operations to solve problems: |  |  |  |
| 2.3* Identify one more than, one less than, 10 more than, and 10 less than a given number. <br> $\checkmark$ Identify one more than. <br> $\checkmark$ Identify more and less. <br> $\checkmark$ Demonstrate the ability to give "one more." |  |  |  |
| Algebra and Functions: Number of Tasks: <br>  <br>  <br> Percentage of Test: 1 <br> $12.5 \%$   |  |  |  |
| Kindergarten |  |  |  |
| 1.0 Students sort and classify objects: |  |  |  |
| 1.1 | Identify, sort, and cla group (e.g., all these <br> $\checkmark$ Match colors. <br> $\checkmark$ Match shapes. <br> $\checkmark$ Match sizes. <br> $\checkmark$ Sort items by sing <br> $\checkmark$ Classify objects b | ify objects by attribute and alls are green, those are r <br> attribute. <br> category (i.e., food, clothing | identify o d). |

$\checkmark$ Focus of the California content standards for the alternate assessment.

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* Key standard as identified in the Mathematics Framework for California Public Schools.
$\checkmark$ Focus of the California content standards for the alternate assessment.
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# California Alternate Performance Assessment (CAPA) <br> Mathematics Blueprint <br> Level II: Grades 2-3 <br> (Blueprint adopted by the State Board of Education 3/06) 

| California Content Standards |  |  |  |
| :---: | :---: | :---: | :---: |
| Number Sense: |  | Number of Tasks: Percentage of Test: | $\begin{aligned} & \hline 4 \\ & 50 \% \end{aligned}$ |
| Grade 2 |  |  |  |
| 1.0 | Students understand the relationship between numbers, quantities, and place value in whole numbers up to 1,000 : |  |  |
| 1. | Count, read, and write whole numbers to 1,000 and identify the place value for each digit. <br> $\checkmark$ Count and identify numbers from one to ten. |  |  |
| 1.3 | Order and compare whole numbers to 1,000 by using the symbols $<,=,>$. <br> $\checkmark$ Compare two sets of objects to determine which is equal by using the equal symbol. |  |  |
| 2.0 | Students estimate, calculate, and solve problems involving addition and subtraction of two- and three-digit numbers: |  |  |
| 2.2 | Find the sum or difference of two whole numbers up to 3 digits long. <br> $\checkmark$ Find the sum of two whole numbers (limited to single digit numbers and sums up to five). |  |  |
| 3.0 | Students model and solve simple problems involving multiplication and division: |  |  |
| 3.3 | Know the multiplication tables of 2's, 5's, and 10's (to "times 10") and commit them to memory. <br> $\checkmark$ Count by 2's to ten from memory. |  |  |
| 4.0 | Students understand that fractions and decimals may refer to parts of a set and parts of a whole: |  |  |
| 4. | Recognize, name, and compare unit fractions from 1/12 to 1/2. <br> $\checkmark$ Recognize $1 / 2$ and one whole using pictures and overlays of familiar objects. |  |  |
| 4.3 | Know that when all fractional parts are included, such as four-fourths, the result is equal to the whole and to one. <br> $\checkmark$ Know that when all fractional parts are included, limited to two halves, the result is equal to the whole or to one. |  |  |
| 5.0 | Students model and solve problems by representing, adding, and subtracting amounts of money: |  |  |
| 5. | Solve problems using combinations of coins and bills. $\checkmark$ Identify penny, quarter, and dollar bill. |  |  |
| 5.2 | Know and use the decimal notation and the dollar and cent symbols for money. <br> $\checkmark$ Recognize the dollar symbol. |  |  |
| Grade 3 |  |  |  |
| 1.0 | Students understand the place value of whole numbers: |  |  |
| 1. | Count, read, and write whole numbers to 10,000 . <br> $\checkmark$ Count and identify numbers from 1 to 15 and write numbers from 1 to 5 . |  |  |
| 1.2 | Compare and order whole numbers to 10,000. <br> $\checkmark$ Order whole numbers to 5 . |  |  |

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| 2.0 | Students calculate and solve problems involving addition, subtraction, multiplication, and division: |
| :---: | :---: |
| 2.1 | Find the sum or difference of two whole numbers between 0 and 10,000. <br> $\checkmark$ Find the sum of two whole numbers (limited to single digits and sums up to 10). |
| 3.0 | Students will understand the relationship between whole numbers, simple fractions, and decimals: |
| 3.1 | Compare fractions represented by drawings or concrete materials to show equivalency and to add and subtract simple fractions in context (e.g., $1 / 2$ of a pizza is the same amount as $2 / 4$ of another pizza that is the same size; show that $3 / 8$ is larger than $1 / 4$ ). <br> $\checkmark$ Compare halves and one whole. <br> $\checkmark$ Recognize 1/4. |
| 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. <br> $\checkmark$ Solve simple one-step problems involving addition of money amounts using either pennies or dollars. |
| Algebra and Functions: | bra and Functions: Number of Tasks: <br> Percentage of Test: 1 <br> $12.5 \%$ |
| Grade 3 |  |
| 1.0 | Students select appropriate symbols, operations, and properties to represent, describe, simplify, and solve simple number relationships: |
| 1.1 | Represent relationships of quantities in the form of mathematical expressions, equations and inequalities. <br> $\checkmark$ Relate simple problem situations to number sentences involving addition with sums up to 5 . |
| 1.3 | Select appropriate operational and relational symbols to make an expression true (e.g., if $4 \ldots 3=12$, what operational symbol goes in the blank?). <br> $\checkmark$ Select appropriate operational sign to make a number sentence true, using numbers up to 5 . |
| 2.0 | Students represent simple functional relationships: |
| 2. | Extend and recognize a linear pattern by its rules (e.g., the number of legs on a given number of horses may be calculated by counting by 4's or by multiplying the number of horses by 4). <br> $\checkmark$ Extend and recognize an AB pattern by a single attribute. <br> $\checkmark$ Extend and recognize an $A B C$ pattern by a single attribute. |
| Measurement and Geometry: Number of Tasks: 2 <br> Percentage of Test: |  |
| Grade 2 |  |
| 1.0 | Students understand that measurement is accomplished by identifying a unit of measure, iterating (repeating) that unit, and comparing it to the item to be measured. |
| 1.3 | Measure the length of an object to the nearest inch and/or centimeter. <br> $\checkmark$ Measure the length of an object to the nearest foot (up to 3 ft .). |

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## California Alternate Performance Assessment (CAPA) <br> Mathematics Blueprint <br> Level II: Grades 2-3 <br> (Blueprint adopted by the State Board of Education 3/06)

1.4 Tell time to the nearest quarter hour and know relationships of time (e.g., minutes in an hour, days in a month, and weeks in a year).
$\checkmark$ Know relationships of time (night and day).
2.0 Students identify and describe the attributes of common figures in the plane and of common objects in space:
2.1* Describe and classify plane and solid geometric shapes (e.g., circle, triangle, square, rectangle, sphere, pyramid, cube, rectangular prism) according to the number and shape of faces, edges, and vertices.
$\checkmark$ Identify common geometric objects (e.g., circle, triangle, and square).

## Grade 3

1.0 Students choose and use the appropriate units and measurement tools to quantify the properties of objects:
1.1 Choose the appropriate tools and units (metric and U.S.) and estimate and measure the length, liquid volume, and weight/mass of given objects. $\checkmark$ Choose the appropriate tool to measure length and weight.
2.0 Students describe and compare the attributes of plane and solid geometric figures and use their understanding to show relationships and solve problems:
2.1* Identify, describe, and classify polygons (including pentagons, hexagons, and octagons). $\checkmark$ Identify an attribute of a square and triangle (sides only).
2.5 Identify, describe, and classify common three-dimensional geometric objects (e.g., cube, rectangular solid, sphere, prism, pyramid, cone, and cylinder). $\checkmark$ Identify common three-dimensional objects (cube and cone).
Statistics, Data Analysis, and Probability: Number of Tasks: 1 Percentage of Test: 12.5\%

## Grade 2

1.0 Students collect numerical data and record, organize, display and interpret the data on bar graphs and other representations:
1.4 Ask and answer simple questions related to data representations. $\checkmark$ Answer simple questions related to data representations.

## Grade 3

1.0 Students conduct simple probability experiments by determining the number of possible outcomes and make simple predictions:
1.3* Summarize and display the results of probability experiments in a clear and organized way (e.g., use a bar graph or line plot).
$\checkmark$ Answer simple questions based on information from a chart, bar graph, or picture graph.
Total Level II Tasks: Total Number of Tasks: 8 Percentage of Test 100\%

* Key standard as identified in the Mathematics Framework for California Public Schools.


# California Alternate Performance Assessment (CAPA) <br> Mathematics Blueprint <br> Level III: Grades 4-5 <br> (Blueprint adopted by the State Board of Education 3/06) 

## California Content Standards

| Number Sense: | Number of Tasks: | 3 |
| :--- | :--- | :--- |
|  | Percentage of Test: | $37.5 \%$ |
| Grade 4 |  |  |

1.0 Students understand the place value of whole numbers and decimals to two decimal places and how whole numbers and decimals relate to simple fractions. Students use the concepts of negative numbers:
1.1* Read and write whole numbers in the millions.
$\checkmark$ Write whole numbers to 15 .
$\checkmark$ Count and read whole numbers to 20.
$\checkmark$ Identify the ones and tens place value of a whole number up to 15 .
1.2* Order and compare whole numbers and decimals to two decimal places.
$\checkmark$ Order whole numbers to 10.
$\checkmark$ Compare whole numbers using the $>$ and $=$ symbols.
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.
$\checkmark$ Identify the fraction represented by a drawing of parts of a figure ( $1 / 2$ and $1 / 4$ ).
2.0 Students extend their use and understanding of whole numbers to the addition and subtraction of simple decimals:
2.1 Estimate and compare the sum or difference of whole numbers and positive decimals to two places. $\checkmark$ Using a calculator, determine the sum of whole numbers up to 20.
3.0 Students solve problems involving addition, subtraction, multiplication and division of whole numbers and understand the relationships among the operations:
3.1* Demonstrate an understanding of, and the ability to use, standard algorithms for the addition and subtraction of multi-digit numbers.
$\checkmark$ Using a set of numbers $1-5$, find the difference of two whole numbers.

## Grade 5

| 1.0 | Students compute with very large and very small numbers, positive integers, decimals, and <br> fractions and understand the relationship between decimals, fractions, and percents. They <br> understand the relative magnitudes of numbers: |
| :--- | :--- |
| $1.5^{*}$ | Identify and represent on a number line decimals, fractions, mixed numbers, and positive and <br> negative integers. <br> $\checkmark$ Identify numbers up to 50 on a number line. |
| 2.0 | Students perform calculations and solve problems involving addition, subtraction, and simple <br> multiplication and division of fractions and decimals: |
| $2.1^{*}$ | Add, subtract, multiply, and divide with decimals; add with negative integers; subtract positive <br> integers from negative integers; and verify the reasonableness of the results. <br> $\checkmark$ |

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# California Alternate Performance Assessment (CAPA) <br> Mathematics Blueprint <br> Level III: Grades 4-5 <br> (Blueprint adopted by the State Board of Education 3/06) 

2.3* 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.
$\checkmark$ Solve simple problems with sums up to 20, including ones arising in concrete situations, involving the addition and subtraction of whole numbers.

## Algebra and Functions: Number of Tasks: 1 Percentage of Test: 12.5\%

## Grade 4

1.0 Students use and interpret variables, mathematical symbols, and properties to write and simplify expressions and sentences:
1.1 Use letters, boxes, or other symbols to stand for any number in simple expressions and equations (e.g., demonstrate an understanding and the use of the concept of a variable). $\checkmark$ Use a box to stand for a single digit number in simple equations where the sum is up to 5 .

## Grade 5

1.0 Students use variables in simple expressions, compute the value of the expression for specific values of the variable, and plot and interpret the results:
1.1 Use information taken from a graph or equation to answer questions about a problem situation. $\checkmark$ Use information taken from a graph to answer simple questions.

## Measurement and Geometry: Number of Tasks: 2 <br> Percentage of Test: 25\%

## Grade 4

3.0 Students demonstrate an understanding of plane and solid geometric objects and use this knowledge to show relationships and solve problems:
3.1 Identify lines that are parallel and perpendicular. $\checkmark$ Identify lines that are parallel.
3.2 Identify the radius and diameter of a circle. $\checkmark$ Identify the diameter of a circle.
3.3 Identify congruent figures. $\checkmark$ Identify congruent shapes.
3.6 Visualize, describe, and make models of geometric solids (e.g., prisms, pyramids) in terms of the number and shape of faces, edges, and vertices; interpret two-dimensional representations of threedimensional objects; and draw patterns (of faces) for a solid that, when cut and folded, will make a model of the solid.
$\checkmark$ Identify a face, an edge, or a vertex of a cube.

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| Grade 5 |  |
| :---: | :---: |
| 1.0 | Students understand and compute the volumes and areas of simple objects: |
| 1.4 | Differentiate between and use appropriate units of measures for, two- and three-dimensional objects (i.e., find perimeter, area, volume). <br> $\checkmark$ Choose the appropriate tool to measure the liquid volume and weight/mass of a given object. |
| 2.0 | Students identify, describe, and classify the properties of, and the relationships between, plane and solid geometric figures: |
| 2.1* | Measure, identify, and draw angles, perpendicular and parallel lines, rectangles, and triangles by using appropriate tools (e.g., straightedge, ruler, compass, protractor, drawing software). <br> $\checkmark$ Identify common geometric shapes (rectangles, diamonds, octagons, and stars). |
| Statistics, Data Analysis, and Probability:Number of Tasks: <br> Percentage of Test: $\mathbf{2 5 \%}$ |  |
| Grade 4 |  |
| 1.0 | Students organize, represent, and interpret numerical and categorical data and clearly communicate their findings: |
| 1.1 | Formulate survey questions; systematically collect and represent data on a number line; and coordinate graphs, tables, and charts. <br> $\checkmark$ Represent data in a graph, table, or chart. |
| 1.2 | Identify the mode(s) for sets of categorical data and the mode(s), median, and any apparent outliers for numerical data sets. <br> $\checkmark$ Identify the mode from a graph or representation. |
| 1.3 | Interpret one- and two-variable data graphs to answer questions about a situation. <br> $\checkmark$ Answer a simple question related to a graph. |
| Grade 5 |  |
| 1.0 | Students display, analyze, compare, and interpret different data sets, including data sets of different sizes: |
| 1.1 | Know the concepts of mean, median, and mode; compute and compare simple examples to show that they may differ. <br> $\checkmark$ Find the median of a sequenced data set containing 5 data points. |
| 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. <br> $\checkmark$ Identify a point up to five on a vertical number line. <br> $\checkmark$ Identify a point up to five on a horizontal number line. |
| Total Level III Tasks: $\begin{array}{ll}\text { Total Number of Tasks: } \\ \\ \text { Percentage of Test: } & \mathbf{8} \\ 100 \%\end{array}$ |  |

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## Preface to CAPA Mathematics Levels IV and V

The grade-level mathematics standards are designed at the lower grades to provide a foundation for concepts introduced at higher grades. The grade-level standards for grades six and seven, for example, cover rational numbers, formulas, linear equations, ratios, and decimals. These standards provide the basis for concepts covered in the discipline-specific math courses that begin with algebra in grade eight.

The CAPA blueprints provide standards appropriate for students with significant cognitive disabilities. The standards in the mathematics blueprints for CAPA are not necessarily arranged so that the lower grades provide a foundation for the higher grades. The blueprints for CAPA Level II (grades two and three) and Level III (grades four and five), for example, consist of selected mathematics standards from grades two through five. Because they contain specifically selected standards, the CAPA Level II and Level III blueprints do not provide a complete foundation for mathematics assessed at higher grades. To ensure the full range of standards coverage, the blueprints for CAPA Level IV (grades six through eight) and Level V (grades nine through eleven) include standards from lower grades. The blueprint for CAPA Level IV (grades six through eight), for example, includes standards from grades three and four as well as grade six, and the blueprint for CAPA Level V (grades nine through eleven) includes standards from grades two through four as well as grade seven.

Care has been taken to ensure that, as the blueprints progress from the lower to the higher CAPA levels, they represent growth in knowledge and skills required and an increase in cognitive complexity.

# California Alternate Performance Assessment (CAPA) <br> Mathematics Blueprint <br> Level IV: Grades 6-8 <br> (Blueprint adopted by the State Board of Education 3/06) 

| California Content Standard |  |  |  |
| :---: | :---: | :---: | :---: |
|  | er Sense: | Number of Tasks: Percentage of Test: | $\begin{aligned} & 5 \\ & 62.5 \% \end{aligned}$ |
| Grade 3 |  |  |  |
| 1.0 Students understand the place value of whole numbers: |  |  |  |
| 1.4 Round up numbers to 10,000 to the nearest ten, hundred, and thousand. |  |  |  |
| Grade 4 |  |  |  |
| 3.0 | Students solve problems involving addition, subtraction, multiplication, and division of whole numbers and understand the relationships among the operations: |  |  |
| 3.1 | Demonstrate an understanding of, and the ability to use, standard algorithms for the addition and subtraction of multi-digit numbers. <br> $\checkmark$ Using a calculator, solve addition problems with sums up to 75 . |  |  |
| Grade 6 |  |  |  |
| 1. | Students compare and order positive and negative fractions, decimals, and mixed numbers. Students solve problems involving fractions, ratios, proportions, and percentages: |  |  |
| 1.1 | Compare and order positive and negative fractions, decimals, and mixed numbers and place them on a number line. <br> $\checkmark$ Order and compare numbers up to 75 . |  |  |
| 2.0 | Students calculate and solve problems involving addition, subtraction, multiplication, and division: |  |  |
| 2. | Solve problems involving addition, subtraction, multiplication, and division of positive fractions and explain why a particular operation was used for a given situation. <br> $\checkmark$ Using a calculator, solve addition and subtraction problems with sums up to 75 . |  |  |
| 2.2 | Explain the meaning of multiplication and division of positive fractions and perform the calculations (e.g., $5 / 8$ divided by $15 / 16=5 / 8 \times 16 / 15=2 / 3$ ). <br> $\checkmark$ Use repetitive addition to explain multiplication. |  |  |
| 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. <br> $\checkmark$ Using a calculator, solve real-life addition and subtraction problems with sums up to 30 . |  |  |
| Algebra and Functions: |  | Number of Tasks: Percentage of Test | $\begin{aligned} & 2 \\ & 25 \% \\ & \hline \end{aligned}$ |
| Grade 6 |  |  |  |
| 1.0 | Students write verbal expressions and sentences as algebraic expressions and equations; they evaluate algebraic expressions, solve simple linear equations, and graph and interpret their results: |  |  |
| 1. | Write and solve one-step linear equations in one variable. $\checkmark$ Solve one-step linear equations in one variable. |  |  |
| 2.0 | Students analyze and use tables, graphs, and rules to solve problems involving rates and proportions: |  |  |
| 2. | Convert one unit of measurement to another (e.g., from feet to miles, from centimeters to inches). <br> $\checkmark$ Convert one unit of measurement to another (e.g., foot to inches, feet to yard). |  |  |

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# California Alternate Performance Assessment (CAPA) <br> Mathematics Blueprint <br> Level V: Grades 9-12 <br> (Blueprint adopted by the State Board of Education 3/06) 



* Key standard as identified in the Mathematics Framework for California Public Schools


## California Alternate Performance Assessment (CAPA)

Mathematics Blueprint
Level V: Grades 9-12
(Blueprint adopted by the State Board of Education 3/06)


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