

Introduction - Grade 2 Mathematics

The following released test questions are taken from the Grade 2 Mathematics Standards Test. This test is one of the California Standards Tests administered as part of the Standardized Testing and Reporting (STAR) Program under policies set by the State Board of Education.

All questions on the California Standards Tests are evaluated by committees of content experts, including teachers and administrators, to ensure their appropriateness for measuring the California academic content standards in Grade 2 Mathematics. In addition to content, all items are reviewed and approved to ensure their adherence to the principles of fairness and to ensure no bias exists with respect to characteristics such as gender, ethnicity, and language.

This document contains released test questions from the California Standards Test forms in 2003. First on the pages that follow are lists of the standards assessed on the Grade 2 Mathematics Test. Next are released test questions. Following the questions is a table that gives the correct answer for each question, the content standard that each question is measuring, and the year each question last appeared on the test.

The following table lists each strand/reporting cluster, the number of items that appear on the exam, and the number of released test questions that appear in this document.

STRAND/REPORTING CLUSTER	NUMBER OF QUESTIONS ON EXAM	NUMBER OF RELEASED TEST QUESTIONS
Number Sense – Place Value, Addition, and Subtraction	15	3
Number Sense – Multiplication, Division, and Fractions	23	7
Algebra and Functions	6	2
Measurement and Geometry	14	3
Statistics, Data Analysis, and Probability	7	1
TOTAL	65	16

In selecting test questions for release, three criteria are used: (1) the questions adequately cover a selection of the academic content standards assessed on the Grade 2 Mathematics Test; (2) the questions demonstrate a range of difficulty; and (3) the questions present a variety of ways standards can be assessed. These released test questions do not reflect all of the ways the standards may be assessed. Released test questions will not appear on future tests.

In Grade 2, the actual Mathematics question does not appear in the test booklet but is read to the students by the teacher administering the test. In this booklet, the questions are printed in bold-faced capital letters.

For more information about the California Standards Tests, visit the California Department of Education's Web site at <http://www.cde.ca.gov/statetests/star/> or <http://www.cde.ca.gov/ta/tg/sr/resources.asp>.

THE NUMBER SENSE STRAND

In Grade 2, there are two reporting clusters within the Number Sense strand: 1) Place Value, Addition, and Subtraction and 2) Multiplication, Division, and Fractions. This booklet contains released test questions for each of these clusters.

The following five California content standards are included in the Place Value, Addition, and Subtraction reporting cluster of the Number Sense strand and are represented in this booklet by three test questions. These questions represent only some ways in which these standards may be assessed on the Grade 2 California Mathematics Standards Test.

CALIFORNIA CONTENT STANDARDS IN THIS REPORTING CLUSTER

Number Sense	
Standard Set 1.0	Students understand the relationship between numbers, quantities, and place value in whole numbers up to 1,000:
2NS1.1*	Count, read, and write whole numbers to 1,000 and identify the place value for each digit.
2NS1.2	Use words, models, and expanded forms (e.g., $45 = 4 \text{ tens} + 5$) to represent numbers (to 1,000).
2NS1.3*	Order and compare whole numbers to 1,000 by using the symbols $<$, $=$, $>$.
Standard Set 2.0	Students estimate, calculate, and solve problems involving addition and subtraction of two- and three-digit numbers:
2NS2.1*	Understand and use the inverse relationship between addition and subtraction (e.g., an opposite number sentence for $8 + 6 = 14$ is $14 - 6 = 8$) to solve problems and check solutions.
2NS2.2*	Find the sum or difference of two whole numbers up to three digits long.

* Denotes key standards (*Mathematics Framework for California Public Schools*)

The following nine California content standards are included in the Multiplication, Division, and Fractions reporting cluster of the Number Sense strand and are represented in this booklet by seven test questions. These questions represent only some ways in which these standards may be assessed on the Grade 2 California Mathematics Standards Test.

CALIFORNIA CONTENT STANDARDS IN THIS REPORTING CLUSTER

Number Sense	
Standard Set 3.0*	Students model and solve simple problems involving multiplication and division:
2NS3.1*	Use repeated addition, arrays, and counting by multiples to do multiplication.
2NS3.2*	Use repeated subtraction, equal sharing, and forming equal groups with remainders to do division.
2NS3.3*	Know the multiplication tables of 2s, 5s, and 10s (to “times 10”) and commit them to memory.
Standard Set 4.0	Students understand that fractions and decimals may refer to parts of a set and parts of a whole:
2NS4.1*	Recognize, name, and compare unit fractions from $\frac{1}{12}$ to $\frac{1}{2}$.
2NS4.2*	Recognize fractions of a whole and parts of a group (e.g., one-fourth of a pie, two-thirds of 15 balls).
2NS4.3*	Know that when all fractional parts are included, such as four-fourths, the result is equal to the whole and to one.
Standard Set 5.0	Students model and solve problems by representing, adding, and subtracting amounts of money:
2NS5.1*	Solve problems using combinations of coins and bills.
2NS5.2*	Know and use the decimal notation and the dollar and cent symbols for money.
Standard Set 6.0	Students use estimation strategies in computation and problem solving that involve numbers that use the ones, tens, hundreds, and thousands places:
2NS6.1	Recognize when an estimate is reasonable in measurements (e.g., closest inch).

* Denotes key standards (*Mathematics Framework for California Public Schools*)

THE ALGEBRA AND FUNCTIONS STRAND/REPORTING CLUSTER

The following three California content standards are included in the Algebra and Functions strand/reporting cluster and are represented in this booklet by two test questions. These questions represent only some ways in which these standards may be assessed on the Grade 2 California Mathematics Standards Test.

CALIFORNIA CONTENT STANDARDS IN THIS STRAND/CLUSTER

Algebra and Functions

Standard Set 1.0 Students model, represent, and interpret number relationships to create and solve problems involving addition and subtraction:

2AF1.1*	Use the commutative and associative rules to simplify mental calculations and to check results.
2AF1.2	Relate problem situations to number sentences involving addition and subtraction.
2AF1.3	Solve addition and subtraction problems by using data from simple charts, picture graphs, and number sentences.

* Denotes key standards (*Mathematics Framework for California Public Schools*)

THE MEASUREMENT AND GEOMETRY STRAND/REPORTING CLUSTER

The following seven California content standards are included in the Measurement and Geometry strand/reporting cluster and are represented in this booklet by three test questions. These questions represent only some ways in which these standards may be assessed on the Grade 2 California Mathematics Standards Test.

CALIFORNIA CONTENT STANDARDS IN THIS STRAND/CLUSTER

Measurement and Geometry

Standard Set 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:

2MG1.1 Measure the length of objects by iterating (repeating) a nonstandard or standard unit.

2MG1.2 Use different units to measure the same object and predict whether the measure will be greater or smaller when a different unit is used.

2MG1.3* Measure the length of an object to the nearest inch and/or centimeter.

2MG1.4 Tell time to the nearest quarter hour and know relationships of time (e.g., minutes in an hour, days in a month, weeks in a year).

2MG1.5 Determine the duration of intervals of time in hours (e.g., 11:00 a.m. to 4:00 p.m.).

Standard Set 2.0* Students identify and describe the attributes of common figures in the plane and of common objects in space:

2MG2.1* 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.

2MG2.2* Put shapes together and take them apart to form other shapes (e.g., two congruent right triangles can be arranged to form a rectangle).

* Denotes key standards (*Mathematics Framework for California Public Schools*)

THE STATISTICS, DATA ANALYSIS, AND PROBABILITY STRAND/REPORTING CLUSTER

The following four California content standards are included in the Statistics, Data Analysis, and Probability strand/reporting cluster and are represented in this booklet by one test question. This question represents only one way in which these standards may be assessed on the Grade 2 California Mathematics Standards Test.

CALIFORNIA CONTENT STANDARDS IN THIS STRAND/CLUSTER

Statistics, Data Analysis, and Probability

Standard Set 1.0* Students collect numerical data and record, organize, display, and interpret the data on bar graphs and other representations:

2PS1.1	Record numerical data in systematic ways, keeping track of what has been counted.
2PS1.2	Represent the same data set in more than one way (e.g., bar graphs and charts with tallies).
2PS1.3	Identify features of data sets (range and mode).
2PS1.4	Ask and answer simple questions related to data representations.

* Denotes key standards (*Mathematics Framework for California Public Schools*)

Released Test Questions

Math

2

The questions in brackets are not printed in the test booklet. The test administrator reads these questions aloud to students.

1 [WHICH NUMBER SENTENCE IS TRUE?]

$$359 < 375$$

A

$$359 > 375$$

B

$$359 < 359$$

C

$$359 > 359$$

D

2 [SOPHIE DID THIS SUBTRACTION PROBLEM. WHICH ADDITION PROBLEM SHOWS THAT SHE GOT THE RIGHT ANSWER?]

85
- 44

41

$$\begin{array}{r} 41 \\ + 85 \\ \hline \end{array}$$

A

$$\begin{array}{r} 44 \\ + 85 \\ \hline \end{array}$$

B

$$\begin{array}{r} 41 \\ + 44 \\ \hline \end{array}$$

C

$$\begin{array}{r} 44 \\ + 44 \\ \hline \end{array}$$

D

3 [WHAT IS THE SOLUTION TO THIS PROBLEM?]

$$\begin{array}{r} 419 \\ - 12 \\ \hline \end{array}$$

431

A

421

B

417

C

407

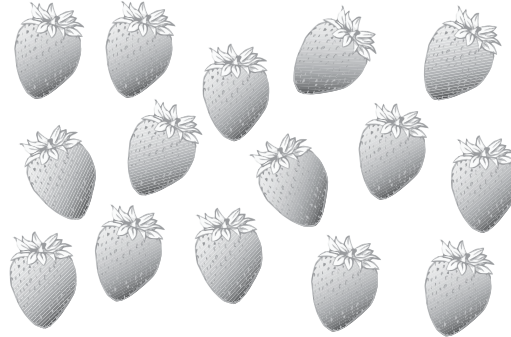
D

2

Math

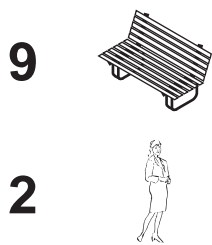
Released Test Questions

4 [KAYLA HAS THESE STRAWBERRIES. SHE WILL GIVE FOUR STRAWBERRIES TO EACH OF HER THREE FRIENDS. HOW MANY STRAWBERRIES WILL BE LEFT FOR KAYLA?]



- | | | | |
|----------|----------|----------|----------|
| 1 | 2 | 3 | 4 |
| A | B | C | D |

5 [THERE ARE NINE BENCHES IN A PARK. THERE ARE TWO PEOPLE SITTING ON EACH BENCH. HOW MANY PEOPLE ARE SITTING ON THE NINE BENCHES ALL TOGETHER?]



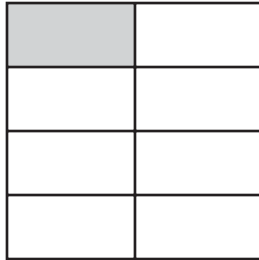
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|----------|----------|----------|----------|
| 11 | 14 | 16 | 18 |
| A | B | C | D |

Released Test Questions

Math

2

6 [WHAT FRACTIONAL PART OF THIS FIGURE IS SHADED?]



$$\frac{1}{8}$$

A

$$\frac{1}{7}$$

B

$$\frac{1}{4}$$

C

$$\frac{1}{2}$$

D

7 [WHAT FRACTION OF THIS SHAPE IS SHADED?]



$$\frac{1}{2}$$

A

$$\frac{2}{3}$$

B

$$\frac{3}{2}$$

C

$$\frac{3}{1}$$

D

8 [WHICH FRACTION IS EQUAL TO ONE WHOLE?]

$$\frac{1}{3}$$

A

$$\frac{1}{8}$$

B

$$\frac{2}{3}$$

C

$$\frac{8}{8}$$

D

2

Math

Released Test Questions

- 9 [MONIQUE HAS FOUR QUARTERS, TWO DIMES, AND ONE NICKEL. HOW MUCH MONEY DOES SHE HAVE?]



\$1.25

\$1.05

A

C

\$0.75

\$1.45

B

D

- 10 [LEE HAS THE MONEY YOU SEE IN THE BOX. HOW MUCH MONEY IS THIS?]



\$2.15

\$2.25

A

C

\$2.20

\$2.30

B

D

- 11** [WHAT NUMBER GOES IN THE BOX TO MAKE THIS NUMBER SENTENCE TRUE?]

$$15 + 8 = \square + 15$$

- | | | | |
|----------|----------|----------|----------|
| 7 | 8 | 15 | 23 |
| A | B | C | D |

- 12** [ANDREW HAD FIFTEEN PENNIES. HE FOUND SOME MORE. NOW HE HAS THIRTY-THREE. WHICH NUMBER SENTENCE COULD BE USED TO FIND HOW MANY PENNIES HE FOUND?]

$$15 + \square = 33$$

A

$$\square - 33 = 15$$

C

$$15 + 33 = \square$$

B

$$\square - 15 = 33$$

D

- 13** [SEAN IS GOING ON VACATION TO VISIT HIS GRANDPARENTS. HE WILL BE GONE ONE MONTH. ABOUT HOW MANY DAYS WILL SEAN BE GONE?]

7 days

A

30 days

B

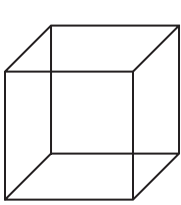
52 days

C

365 days

D

- 14** [HOW MANY FACES DOES A CUBE HAVE?]



4

A

5

B

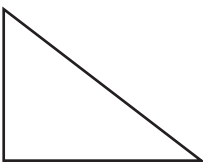
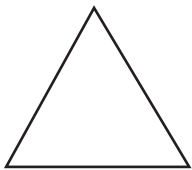
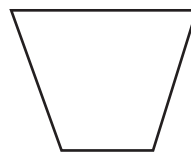
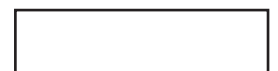
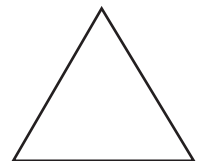
6

C

8

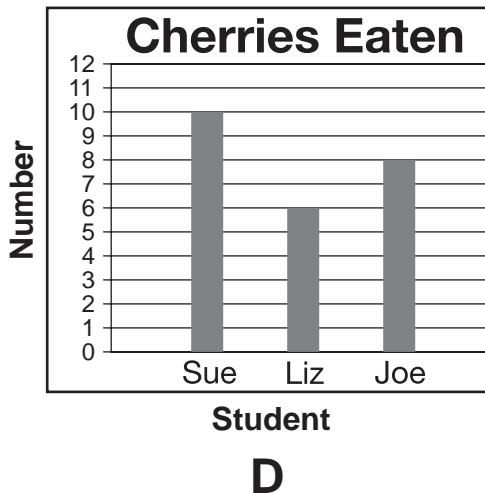
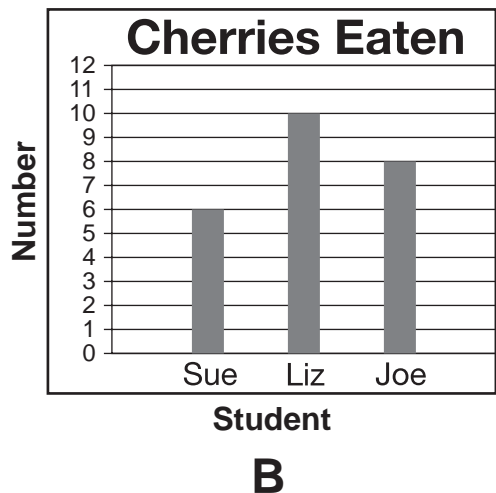
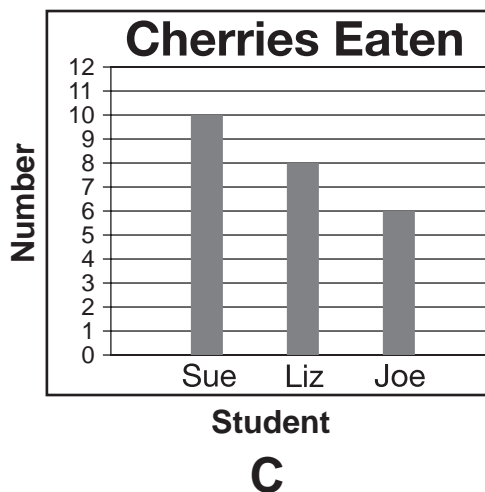
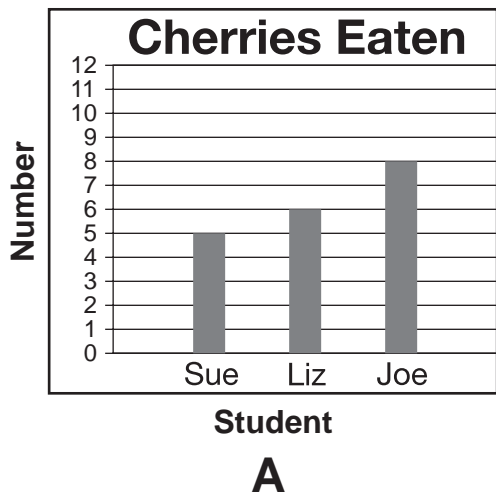
D

- 15** [LOOK AT THE PAIRS OF SHAPES. WHICH IS A PAIR OF RECTANGLES?]

**A****B****C****D**

16 [LOOK AT THE TALLY CHART AT THE TOP OF THE PAGE. THE TALLY CHART SHOWS THE NUMBER OF CHERRIES EACH STUDENT ATE. WHICH GRAPH MATCHES THE TALLY MARKS IN THE CHART?]

Cherries Eaten	
Sue	
Liz	
Joe	



Question Number	Correct Answer	Standard	Year of Test
1	A	2NS1.3	2003
2	C	2NS2.1	2003
3	D	2NS2.2	2003
4	C	2NS3.2	2003
5	D	2NS3.3	2003
6	A	2NS4.1	2003
7	B	2NS4.2	2003
8	D	2NS4.3	2003
9	A	2NS5.1	2003
10	D	2NS5.2	2003
11	B	2AF1.1	2003
12	A	2AF1.2	2003
13	B	2MG1.4	2003
14	C	2MG2.1	2003
15	B	2MG2.1	2003
16	D	2PS1.2	2003