Answer Key For The California Mathematics Standards Grade 1

Introduction: Summary of Goals

GRADE ONE

By the end of grade one, students learn to understand and use the concept of ones and tens in the place value number system. Students add and subtract small numbers with ease. They measure with simple units and locate objects in space. They describe data and analyze and solve simple problems.

Number Sense 1.0: Students understand and use numbers up to 100.

NS 1.1: Students count, read, and write whole numbers up to 100.

a. Write these as numbers:

forty-six	46
seventeen	17
fifteen	15
sixty-four	64
thirty-one	31
ninety	90

b. Write the numbers that you would say when you count forward from 63:

63 64 65   66 67 68 69 70 71

Number Sense 1.0: Students understand and use numbers up to 100.

NS 1.2: Students compare and order whole numbers to 100 by using the symbols for less than, equal to, or greater than (<, =, >).

If the statement is true, circle true. If the statement is false, circle false.

4 < 3 ....true **(false)**

5 > 4.................**(true)** false

19 = 19.................**(true)** false

19 < 14 ....true **(false)**

23 > 18.................**(true)** false

45 > 28.................**(true)** false

92 < 84 ....true **(false)**

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Number Sense 1.0: Students understand and use numbers up to 100.

NS 1.3: Students represent equivalent forms of the same number through the use of physical models, diagrams, and number expressions (to 20) (e.g., 8 may be represented as 4 + 4, 5 + 3, 2 + 2 + 2 + 2, 10 - 2, 11 - 3).

a. Make up an addition or subtraction sentence that has 8 as the answer.

$$\rule{2cm}{0.4pt} \;+\; \rule{2cm}{0.4pt} \;=\; 8$$

b. Make up another math sentence that has 8 as the answer.

$$\rule{2cm}{0.4pt} \;+\; \rule{2cm}{0.4pt} \;=\; 8$$

Any of the following additions are correct: 0 + 8, 1 + 7, 2 + 6, 3 + 5, 4 + 4.

c. Make up another math sentence that has 8 as the answer.

$$\rule{2cm}{0.4pt} \;-\; \rule{2cm}{0.4pt} \;=\; 8$$

Any two numbers with a difference of 8 is a correct answer. For example, 9 -1 , 10 -2, or 11 - 3.

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Number Sense 1.0: Students understand and use numbers up to 100.

NS 1.4: Students count and group objects in ones and tens (e.g. three different groups of 10 and 4 equals 34, or 30 + 4).

There are 10 sticks in each bundle.
1) Write the number of sticks in group a.
2) Then write the number of sticks in group b.

a. **=** **33 (3 tens + 3 ones)**

b. **=** **26 (2 tens + 6 ones)**

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Number Sense 1.0: Students understand and use numbers up to 100.

NS 1.5: Students identify and know the value of coins and show different combinations of coins that equal the same value.

a. Encircle a group of coins that will equal 35 cents:

(10 cent coins)

(5 cent coins)

(1 cent coins)

b. Encircle a different group of coins that will equal 35 cents:

(10 cent coins)

(5 cent coins)

(1 cent coins)

There are many correct answers. These are two examples.

Number Sense 2.0: Students demonstrate the meaning of addition and subtraction and use these operations to solve problems.

NS 2.1: Students know the addition facts (sums to 20) and the corresponding subtraction facts and commit them to memory.

Answer as many facts as you can in two minutes.

$$\begin{array}{r} 4 \\ +\ 1 \\ \hline \boxed{5} \end{array} \qquad \begin{array}{r} 1 \\ +\ 6 \\ \hline \boxed{7} \end{array} \qquad \begin{array}{r} 1 \\ +\ 3 \\ \hline \boxed{4} \end{array} \qquad \begin{array}{r} 2 \\ +\ 4 \\ \hline \boxed{6} \end{array} \qquad \begin{array}{r} 2 \\ +\ 5 \\ \hline \boxed{7} \end{array} \qquad \begin{array}{r} 3 \\ +\ 6 \\ \hline \boxed{9} \end{array}$$

$$\begin{array}{r} 3 \\ +\ 4 \\ \hline \boxed{7} \end{array} \qquad \begin{array}{r} 3 \\ +\ 5 \\ \hline \boxed{8} \end{array} \qquad \begin{array}{r} 4 \\ +\ 6 \\ \hline \boxed{10} \end{array} \qquad \begin{array}{r} 2 \\ +\ 4 \\ \hline \boxed{6} \end{array} \qquad \begin{array}{r} 4 \\ +\ 5 \\ \hline \boxed{9} \end{array} \qquad \begin{array}{r} 4 \\ +\ 7 \\ \hline \boxed{11} \end{array}$$

$$\begin{array}{r} 9 \\ +\ 9 \\ \hline \boxed{18} \end{array} \qquad \begin{array}{r} 5 \\ +\ 7 \\ \hline \boxed{12} \end{array} \qquad \begin{array}{r} 6 \\ +\ 7 \\ \hline \boxed{13} \end{array} \qquad \begin{array}{r} 6 \\ +\ 9 \\ \hline \boxed{15} \end{array} \qquad \begin{array}{r} 6 \\ +\ 6 \\ \hline \boxed{12} \end{array} \qquad \begin{array}{r} 6 \\ +\ 8 \\ \hline \boxed{14} \end{array}$$

$$\begin{array}{r} 7 \\ +\ 8 \\ \hline \boxed{15} \end{array} \qquad \begin{array}{r} 7 \\ +\ 7 \\ \hline \boxed{14} \end{array} \qquad \begin{array}{r} 8 \\ +\ 7 \\ \hline \boxed{15} \end{array} \qquad \begin{array}{r} 7 \\ +\ 9 \\ \hline \boxed{16} \end{array} \qquad \begin{array}{r} 8 \\ -\ 8 \\ \hline \boxed{0} \end{array} \qquad \begin{array}{r} 8 \\ +\ 9 \\ \hline \boxed{17} \end{array}$$

$$\begin{array}{r} 4 \\ -\ 1 \\ \hline \boxed{3} \end{array} \qquad \begin{array}{r} 9 \\ -\ 1 \\ \hline \boxed{8} \end{array} \qquad \begin{array}{r} 7 \\ -\ 1 \\ \hline \boxed{6} \end{array} \qquad \begin{array}{r} 7 \\ -\ 2 \\ \hline \boxed{5} \end{array} \qquad \begin{array}{r} 3 \\ -\ 2 \\ \hline \boxed{1} \end{array} \qquad \begin{array}{r} 9 \\ -\ 2 \\ \hline \boxed{7} \end{array}$$

Number Sense 2.0: Students demonstrate the meaning of addition and subtraction and use these operations to solve problems.

NS 2.1: Students know the addition facts (sums to 20) and the corresponding subtraction facts and commit them to memory.

[CONTINUED]

8	9	8	7	9	8
− 2	− 3	− 3	− 3	− 5	− 4
6	**6**	**5**	**4**	**4**	**4**

6	5	8	9	8	9
− 5	− 3	− 5	− 5	− 6	− 6
1	**2**	**3**	**4**	**2**	**3**

Number Sense 2.0: Students demonstrate the meaning of addition and subtraction and use these operations to solve problems.

NS 2.2: Students use the inverse relationship between addition and subtraction to solve problems.

a. Use these numbers to make two correct number sentences using addition:

5   2   7   **5** + **2** = **7**

2 + **5** = **7**

b. Use these numbers to make two correct number sentences using subtraction:

5   2   7   **7** - **5** = **2**

7 - **2** = **5**

Number Sense 2.0: Students demonstrate the meaning of addition and subtraction and use these operations to solve problems.

NS 2.3: Students identify one more than, one less than, 10 more than, and 10 less than a given number.

Write the answers:

a.   One more than thirty-eight   `39`   `38`
`+1`
`39`

b.   Ten more than sixty   `70`   `60`
`+10`
`70`

c.   One less than twenty-seven   `26`   `27`
`-1`
`26`

d.   Ten less than forty-six   `36`   `46`
`-10`
`36`

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Number Sense 2.0: Students demonstrate the meaning of addition and subtraction and use these operations to solve problems.

NS 2.4: Students count by 2s, 5s, and 10s to 100s.

a.   Count by twos:

2   4   6   8   10   12   14   16   18   20

b.   Count by fives:

5   10   15   20   25   30   35   40   45   50

c.   Count by tens:

10   20   30   40   50   60   70   80   90   100

Number Sense 2.0: Students demonstrate the meaning of addition and subtraction and use these operations to solve problems.

NS 2.5: Students show the meaning of addition (putting together, increasing) and subtraction (taking away, comparing, finding the difference).

Write the answers:

a. I had 10 cupcakes, and I ate 3 of them. How many cupcakes do I have left?

7 cupcakes

$$\begin{array}{r} 10 \\ -3 \\ \hline 7 \end{array}$$

b. Jerry had 8 pencils. His brother gave him 4 more pencils. How many pencils does Jerry have now?

12 pencils

$$\begin{array}{r} 8 \\ +4 \\ \hline 12 \end{array}$$

c. Tim had 6 toy cars. Sam had 7 toy cars. How many cars did they have together?

13 toy cars

$$\begin{array}{r} 6 \\ +7 \\ \hline 13 \end{array}$$

d. Ann read 12 books. Kelly read 4. How many more books than Kelly did Ann read?

8 books

$$\begin{array}{r} 12 \\ -4 \\ \hline 8 \end{array}$$

Number Sense 2.0: Students demonstrate the meaning of addition and subtraction and use these operations to solve problems.

NS 2.6: Students solve addition and subtraction with one- and two-digit numbers (e.g., 5 + 58 = ___).

Write the answers:

a.
$$\begin{array}{r} 34 \\ + 23 \\ \hline 57 \end{array}$$

b.
$$\begin{array}{r} 57 \\ - 4 \\ \hline 53 \end{array}$$

c.
$$\begin{array}{r} 16 \\ + 40 \\ \hline 56 \end{array}$$

d.
$$\begin{array}{r} 35 \\ - 3 \\ \hline 32 \end{array}$$

e.
$$\begin{array}{r} 39 \\ - 8 \\ \hline 31 \end{array}$$

f.
$$\begin{array}{r} 42 \\ + 4 \\ \hline 46 \end{array}$$

Number Sense 2.0: Students demonstrate the meaning of addition and subtraction and use these operations to solve problems.

NS 2.7: Students find the sum of three one-digit numbers.

Write the answers:

a. 5 + 3 + 2 = **10**

b. 6 + 4 + 3 = **3**

Number Sense 3.0: Students use estimation strategies in computation and problem solving that involve numbers that use the ones, tens, and hundreds places.

NS 3.1: Students make reasonable estimates when comparing larger or smaller numbers.

Kim has 62 trading cards. Lou has 20 trading cards. About how many more cards does Kim have than Lou? Circle the closest answer.

80   60   **40**   20

Think of 62 as about 60. Subtract 20 from 60 to estimate the difference.

Algebra and Functions 1.0: Students use number sentences with operational symbols and expressions to solve problems.

AF 1.1: Students write and solve number sentences from problem situations that express relationships involving addition and subtraction.

Write a number sentence to solve this problem.

Marie had 9 pencils. She gave away 4 of the pencils. How many does Marie have left?

5 pencils

9 - 4 = 5

Algebra and Functions 1.0: Students use number sentences with operational symbols and expressions to solve problems.

AF 1.2: Students understand the meaning of the symbols +, -, =.

Fill in **+** or **–** to make the number sentence true:

a.   **5** **+**   **3**   **=**   **8**

b.   **5** **–**   **3**   **=**   **2**

c.   **3** **+**   **4**   **=**   **7**

Measurement and Geometry 1.0: Students use direct comparison and nonstandard units to describe the measurements of objects.

MG 1.1: Students compare the length, weight, and volume of two or more objects by using direct comparison or a nonstandard unit.
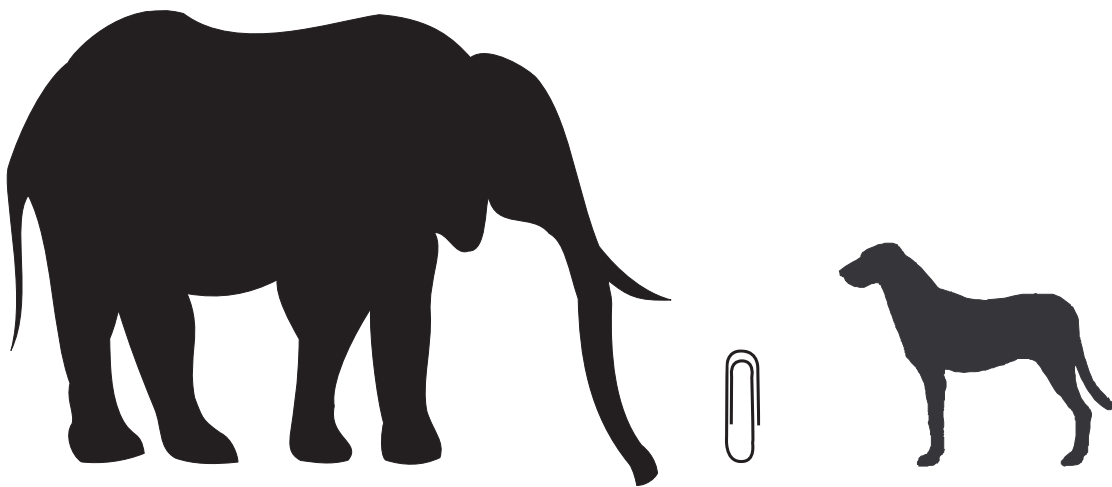
a. About how many paper clips tall is the dog? **2**

b. About how many paper clips tall is the elephant? **4**

Measurement and Geometry 1.0: Students use direct comparison and nonstandard units to describe the measurements of objects.

MG 1.2: Students tell time to the nearest half hour and relate time to events (e.g., before/after, shorter/longer).

a. Is 10:30 a.m. before or after you eat lunch?

Before
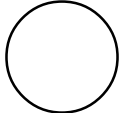
b. Is 2:30 p.m. before or after you eat lunch?
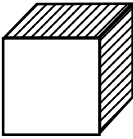
After

Measurement and Geometry 2.0: Students identify common geometric figures, classify them by common attributes, and describe their relative position or their location in space.

MG 2.1: Students identify, describe, and compare triangles, rectangles, squares and circles, including the faces of three-dimensional objects.

Write the letter of the correct answer next to the shape.

D	☐	A. triangle
B	(cube)	B. cube
A	△	C. cylinder
F	◯	D. square
E	▭	E. rectangle that is not a square
C	(cylinder)	F. circle

Measurement and Geometry 1.0: Students identify common geometric figures, classify them by common attributes, and describe their relative position or their location in space.

MG 2.2: Students classify familiar plane and solid objects by common attributes, such as color, position, shape, size, roundness, or number of corners, and explain which attributes are being used for classification.

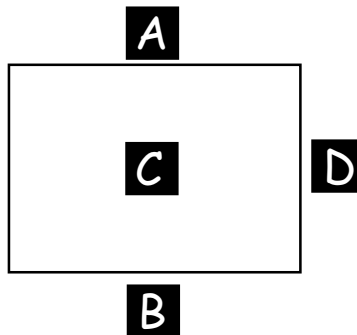Circle the object that is <u>not</u> a rectangle:
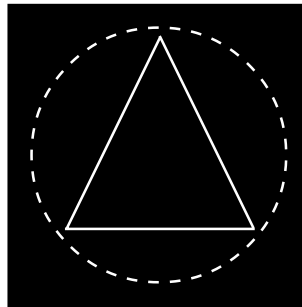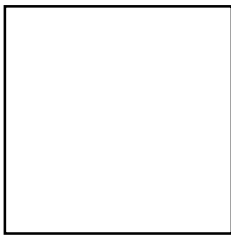
Measurement and Geometry 2.0: Students identify common geometric figures, classify them by common attributes, and describe their relative position or their location in space.

MG 2.3: Students give and follow directions about location.

a. Write the letter A <u>above</u> the rectangle.

b. Write the letter B <u>below</u> the rectangle.

c. Write the letter C <u>in</u> the rectangle.

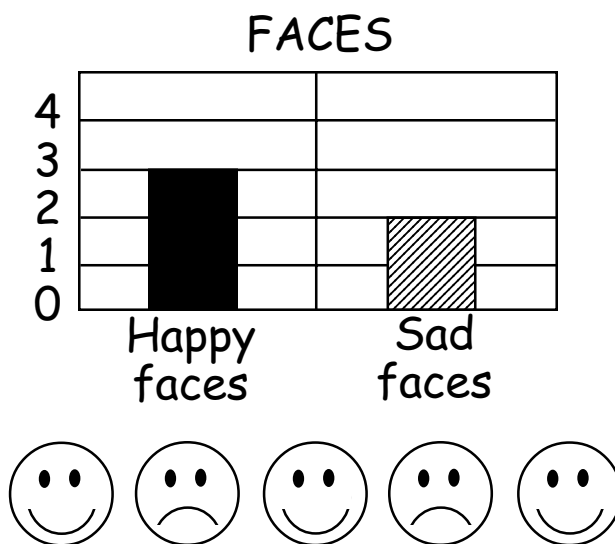d. Write the letter D to the <u>right</u> of the rectangle.

Statistics, Data Analysis, and Probability 1.0: Students organize, represent, and compare data by category on simple graphs and charts.

S 1.1: Students sort objects and data by common attributes and describe the categories.

This graph shows how many sad faces there are. Draw a bar on the graph to show how many happy faces there are:
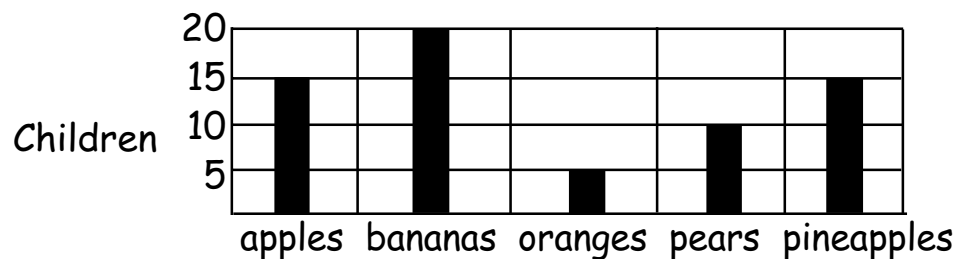
FACES

Statistics, Data Analysis, and Probability 1.0: Students organize, represent, and compare data by category on simple graphs and charts.

S 1.2: Students represent and compare data (e.g., largest, smallest, most often, least often) by using pictures, bar graphs, tally charts, and picture graphs.

This graph shows which fruits children like.

Children	apples	bananas	oranges	pears	pineapples
20		20			
15	15				15
10				10	
5			5		

a.   How many children like apples?   15

b.   Which fruit do the most children like?   bananas

c.   Which fruit do the fewest children like? oranges

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Statistics, Data Analysis, and Probability 1.0: Students organize, represent, and compare data by category on simple graphs and charts.

S 1.2: Students represent and compare data (e.g., largest, smallest, most often, least often) by using pictures, bar graphs, tally charts, and picture graphs.

[CONTINUED]

Kim did a survey of her class to see which flavor ice cream students liked. The chart below shows her results. Read the chart and answer the questions.

Flavors	Students
Chocolate	☰☰ ☰☰
Vanilla	☰☰ ❘❘
Strawberry	❘❘❘❘

a. Which ice cream flavor did students like the most?

chocolate

b. How many students like vanilla?

7

c. How many more students chose chocolate than chose

vanilla?   3

Statistics, Data Analysis, and Probability 2.0: Students sort objects and create and describe patterns by numbers, shapes, sizes, rhythms, or colors.

S 2.1: Students describe, extend, and explain ways to get to a next element in simple repeating patterns (e.g., rhythmic, numeric, color, and shape).

Look at the pattern below determined by the first three objects. Draw the next shape in the blank.