Assessment For The California Mathematics Standards Grade 4

Introduction: Summary of Goals

GRADE FOUR

By the end of grade four, students understand large numbers and addition, subtraction, multiplication, and division of whole numbers. They describe and compare simple fractions and decimals. They understand the properties of, and the relationships between, plane geometric figures. They collect, represent, and analyze data to answer questions.

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Number Sense

NS 1.1 Write as numbers:

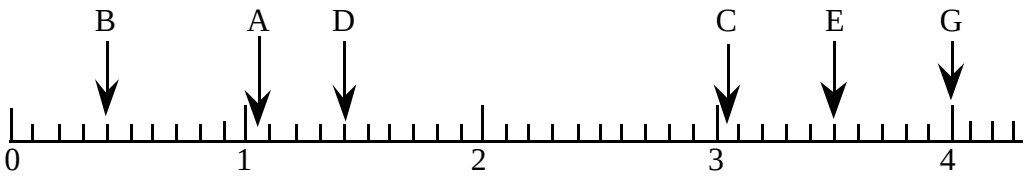
a. three million two hundred fifty-five thousand _____

b. seventy million _____

c. eight million two hundred thousand _____

d. four million eight hundred sixty-two thousand three hundred ten_____

NS 1.2 Write the letter that corresponds to each number that represents the quantity on the number line:



1. _____1.04
2. _____3.05
3. _____4.0
4. _____0.40
5. _____3.50
6. _____1.4

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NS 1.3

a. Round off 5,185,924 to the nearest hundred: _____

b. Round off 5,185,924 to the nearest hundred thousand: _____

c. Round off 5,185,924 to the nearest thousand: _____

NS 1.4

Buses need to be rented for 27 children going on a field trip. Each bus can take 12 children in addition to the driver. How many buses must be rented?

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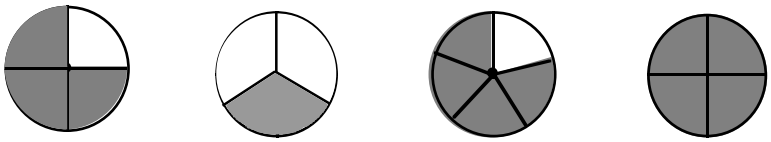
NS 1.5

a. Circle the picture below that shows $\frac{3}{4}$ shaded.



b. Circle the picture below in which 2/3 of the dots are small.

A. • • • •
• • • •
o o o o
o o o o

B. • • • •
• • • •
o o o o

C. • • •
• • •

c. Circle True or False

1. $\frac{1}{3} > 2.5$ True False

2. $\frac{5}{2} < 2.7$ True False

3. $\frac{8}{12} = \frac{2}{3}$ True False

4. $\frac{3}{7} < \frac{10}{21}$ True False

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NS 1.6 Write each fraction or mixed number as a decimal.

a. $\frac{1}{2}$ = _____

b. $\frac{3}{10}$ = _____

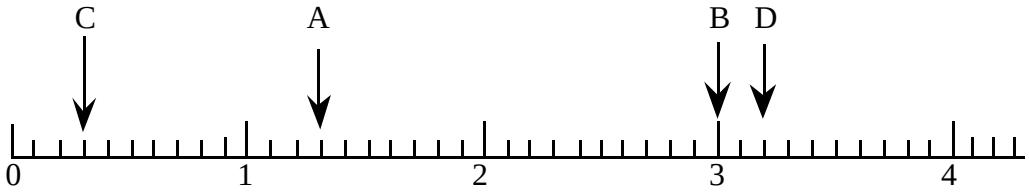
c. $11\frac{2}{100}$ = _____

d. $\frac{1}{4}$ = _____

e. $1\frac{25}{100}$ = _____

NS 1.7 a. Represent the fraction 3/5 using the figure below.

b. Write the letter that shows where each number goes on the number line:



$1\frac{3}{10}$ _____

0.3 _____

3.0 _____

$3\frac{2}{10}$ _____

NS 1.8 Draw a number line and show -2 on it.

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NS 1.9 Write the letter that represents where each number would go on the number line:

a. $1\frac{1}{4}$ _____ b. 2.50 _____ c. $\frac{3}{4}$ _____

NS 2.1 a. 14 - 3.21 = _____ b. 7.4 + 0.34 + 51 = _____

NS 2.2

a. Round 3.19 to the nearest tenth. _____

b. Round 3.19 to the nearest whole number. _____

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NS 3.1

a. 60,000 - 241 = _____

b. 4,863 - 376 = _____

NS 3.2

a. 37 x 302 = _____

b. $4\overline{)2{,}416}$ = _____

NS 3.3

There are bags of sand on a truck. Each bag of sand weighs 124 pounds. How many pounds do 38 bags weigh? _____ pounds.

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NS 3.4

There are 5,064 marbles that need to be packed in boxes. There are 6 boxes. We want to put the same number of marbles in each box. How many marbles will fit into each box? _____

NS 4.1

You know that 1 x 30 = 30. List three *other* ways that you can write 30 as the product of two or more numbers:

_____ = 30 _____ = 30 _____ = 30

NS 4.2

List all the prime numbers between 2 and 14:

_____

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Algebra and Functions

AF 1.1 Tanya has read the first 78 pages of a 130 page book. Write an expression to show the number of pages Tanya must read in order to finish the book. Use a variable in your expression.

_____

AF 1.2 If x = (a – b) - c and a is 10, b is 3 and C is 4, what is the value of x?

_____

AF 1.3 28 x (10 - 8) = _____

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AF 1.4 Area = length × width.

a. The length of a rectangle is 10 meters. The width is 4 meters. What is the area? _____

b. The area of a rectangle is 200 square meters. The width is 10 meters. What is the length? _____

AF 1.5 Find y if $y = 3x + 5$ and $x = 4$.

y = _____

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AF 2.1 Circle the statement that is true:

A. $5 + \frac{4}{4} = 5 + (7 - 6)$

B. $5 + \frac{5}{4} = 5 + (5 - 4)$

C. $5 + \frac{4}{4} = 5 + (4 + 4)$

AF 2.2 Circle the statement that is true:

A. $5\ (3 - 1) = 5 \times 3 - 1$

B. $5\ (3 - 1) = 5\ (1 + 1)$

C. $5\ (3 - 1) = 5 + 3 + 1$

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Measurement and Geometry

MG 1.1 Find the area of a rectangle that is 45 cm wide and 55 cm long:

Area _____

MG 1.2 Do two rectangles with the same area necessarily have the same perimeter? Give an example to support your answer.

MG 1.3 Do two different rectangles with the same perimeter necessarily have the same area?

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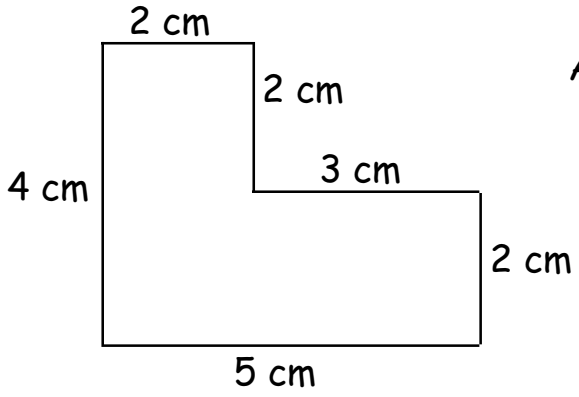
MG 1.4

a. Use a formula to find the area of this rectangle.

Area = _____

b. Find the area of the figure below. All angles are right angles.



Area = _____

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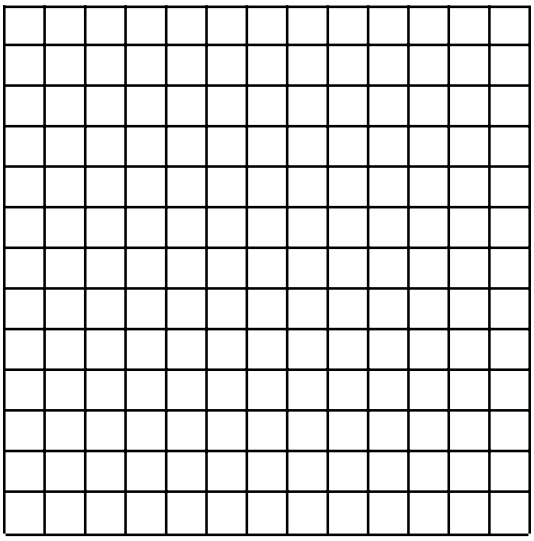
MG 2.1

On the graph, draw the first three points for the equation **y = 3x** using 2, 3 and 4 as the values of x. Connect the points using a straight line.



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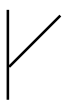
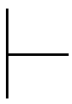
MG 2.2 What is the length of the line segment joining the points (6, -4) and (21, -4)? _____

MG 2.3 What is the length of the line segment joining the points (121, 3) to (121, 17)? _____

MG 3.1 Write the word *parallel* under the lines that are parallel.
Write the word *perpendicular* under the lines that are perpendicular.


_____


_____


_____


_____

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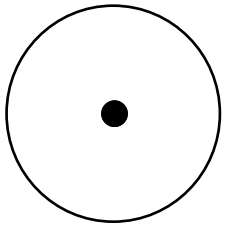
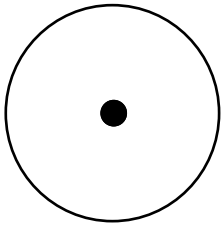
MG 3.2

a. In the circle below, draw a radius:

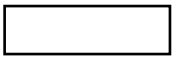


b. In the circle below, draw a diameter:

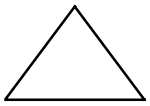


MG 3.3

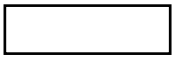
Write the letter of the figure that is congruent with this figure:



A. 

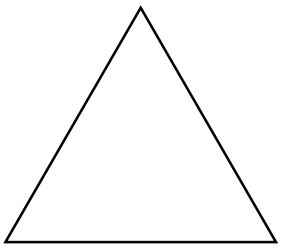
B. 

C. 

D. 

MG 3.4

Draw two lines of symmetry
through the equilateral triangle.



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MG 3.5

a. An angle of less than 90 degrees is:

___ a right angle.
___ an acute angle.
___ an obtuse angle.

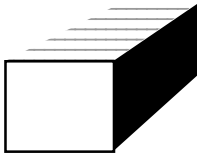
b. An angle of 1/4 turn is:

___ 90°
___ 180°
___ 270°
___ 360°

MG 3.6

a.

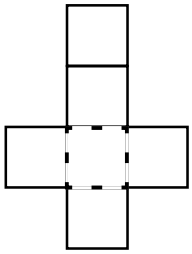
1. How many edges does a rectangular prism have? _____
2. How many vertices does a rectangular prism have? _____



b.

When this flat figure is folded to make a three dimensional figure, the shape will be a:

___ cube
___ pyramid
___ cylinder



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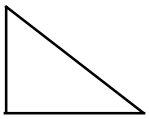
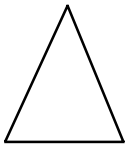
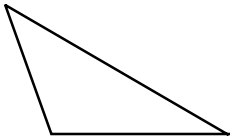
MG 3.7

A.  B.  C. 

Match the name with the triangle

Scalene _____

Isoceles _____

Right _____

MG 3.8

Mark each statement as true or false. Explain your answer:

a. All squares are rectangles: ___ T ___ F

_____

b. All rectangles are squares: ___ T ___ F

_____

c. All parallelograms are rectangles: ___ T ___ F

_____

d. Every rhombus is a parallelogram: ___ T ___ F

_____

e. All parallelograms are squares: ___ T ___ F

_____

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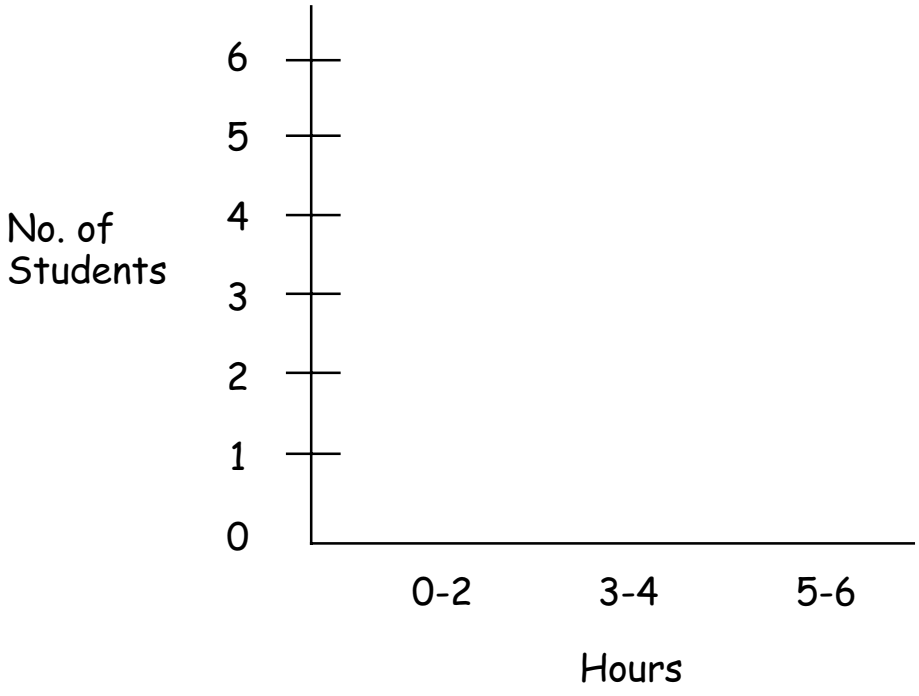
Statistics

S 1.1 These are the number of hours students did homework over the weekend. Draw a bar graph to summarize the information.

student	AR	JC	MT	FR	GS	TB	LM	SG	RT	AL	JS	DC	GN	CL	JN
hours	4	5	4	5	4	2	1	4	0	2	5	4	3	2	1



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S 1.2

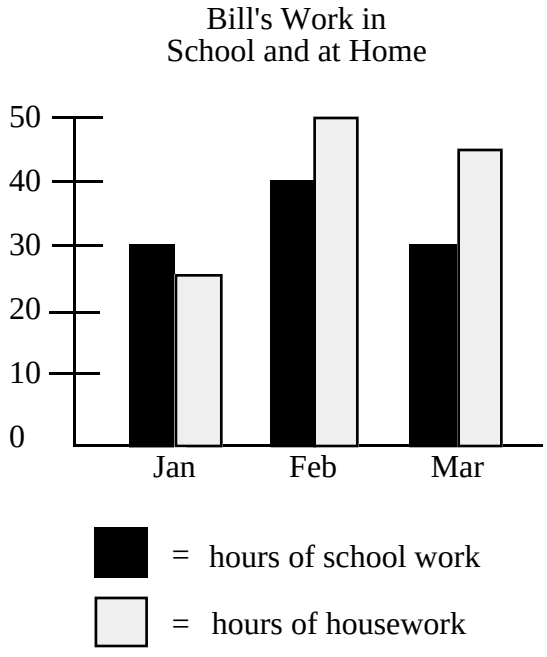
Here are Jason's scores on tests this term:

82 78 77 82 81

a. What is the median score? _____

b. What is the mode score? _____

S 1.3



a. How many hours of school work did Bill do in February?

_____

b. In which month did Bill do more school work than housework?

_____

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S 2.1 Bill flips a coin and tosses a die. List all the possible outcomes.

S 2.2 Jason tossed a coin repeatedly. Heads resulted from 32 of the tosses. Tails resulted from 37 of the tosses. Write a fraction for the ratio of heads to coin tosses.