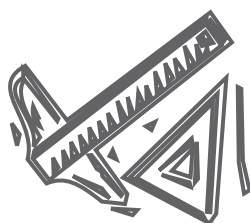




# ***New York State Testing Program***

## **Mathematics**

### **Book 2**



Due to differences in computer equipment, graphic depictions (e.g., maps, diagrams, graphs) may not print according to scale.

The State Education Department provides schools with manipulatives in the form of a sheet of punch-out tools for students to use when taking the Grade 4 or 8 Mathematics Tests. For Grade 4, the tools are a ruler, counters, and pattern blocks. For Grade 8, the tools are a ruler and a protractor. Manipulatives are not included with this sample test because differences in computer equipment may prevent printing according to scale.

Name \_\_\_\_\_  
**Sample Test**



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## TIPS FOR TAKING THE TEST

Here are some suggestions to help you do your best:

- Be sure to carefully read all the directions in the Test Book.
- Ask your teacher to explain any directions you do not understand.
- You may use your tools to help you solve any problem on the test.
- Read each question carefully and think about the answer before writing a response.
- Be sure to show your work when asked. You may receive partial credit if you have shown your work.



This picture means that you will use your ruler.



This picture means that you will use your pattern blocks.



This picture means that you will use your counters.

- 31** The table below shows the amount of rain that fell in four cities in one day.

**AMOUNT OF RAIN**

City	Rain (centimeters)
Albany	0.45
Buffalo	0.60
Syracuse	1.05
Yonkers	0.75

**Part A**

In which city is the amount of rain closest to being  $\frac{1}{2}$  centimeter?

**Answer** \_\_\_\_\_

**Part B**

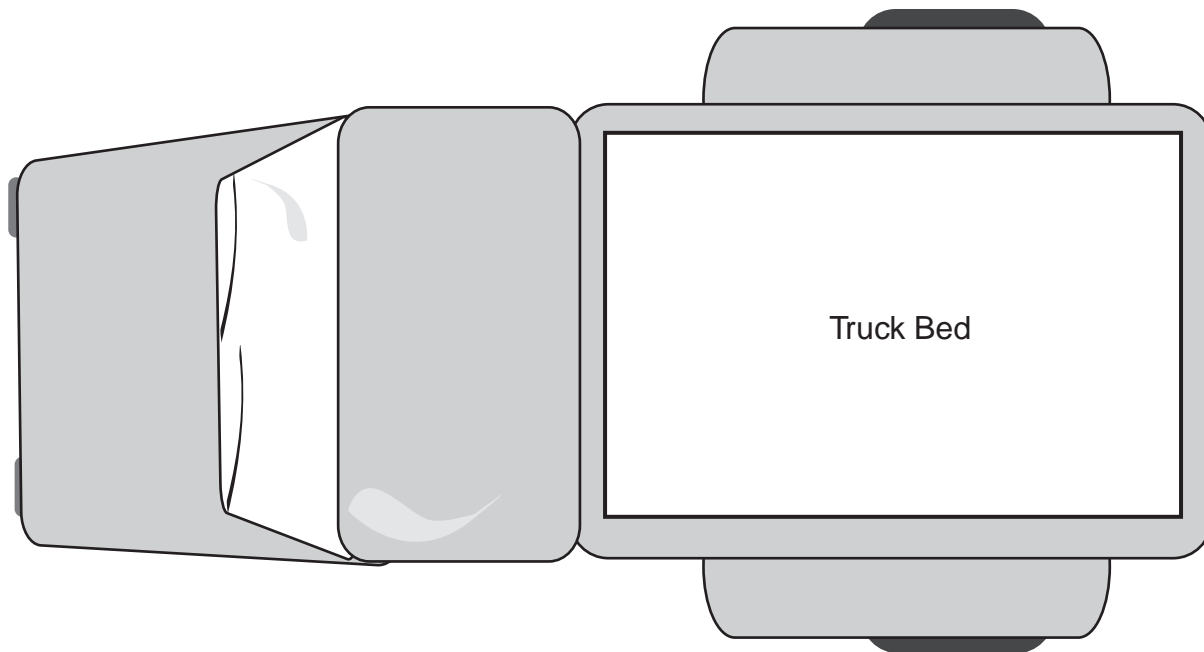
Which city had more rain than Albany and less rain than Yonkers?

**Answer** \_\_\_\_\_



Use your counters to help you solve this problem.

Jared wants to put boxes in the bed of his truck, shown below. He **cannot** stack the boxes. Each of your counters models one box.



How many boxes can Jared fit in the bed of his truck if he cannot stack the boxes?

**Answer** \_\_\_\_\_ boxes

Each counter has an area of 4 square units. What is the area, in square units, of the bottom of the truck bed?

**Answer** \_\_\_\_\_ square units

Ms. Osgood wrote these number problems on the board:

$$12 \square 1 = \underline{\quad}$$

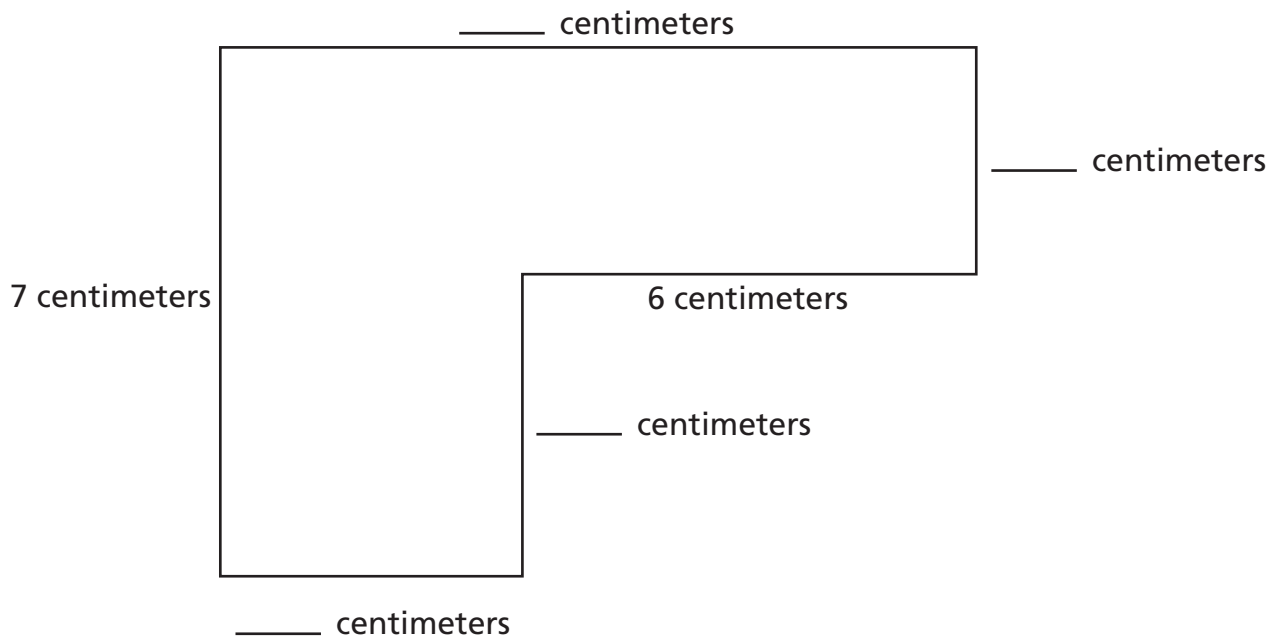
$$12 \square 1 = \underline{\quad}$$

Write a different sign ( + , - , × , ÷ ) in each box above that would give the same answer for both number problems. Then write the answers to the problems on the lines.



Use your ruler to help you solve this problem.

Juanita drew a diagram of her garden, as shown below.



### Part A

Measure the sides of Juanita's diagram with your ruler and write the missing measurements on the lines in the diagram above.

### Part B

Find the perimeter of the diagram of Juanita's garden.

**Show your work.**

**Answer** \_\_\_\_\_ centimeters

**35**

Renée was born in 1993. She wants to know in what year she will have her 21st birthday.

**Part A**

In what year will Renée turn 21?

**Answer** \_\_\_\_\_

**Part B**

On Renée's birthday in 2005, Renée's father will be 4 times as old as Renée. How old will Renée's father be?

**Show your work.**

**Answer** \_\_\_\_\_ years

**Go On**

**36**

Use your counters to help you solve this problem.

Gabriela had 8 tulips in her backyard. One week,  $\frac{1}{2}$  of the tulips bloomed. The next week,  $\frac{1}{4}$  of the rest of the tulips bloomed. What is the total number of tulips that bloomed?

**Show your work.**

**Answer** \_\_\_\_\_ tulips

Jessica went to the park to do a science project. She tallied the number of animals she saw during five minutes. The chart below shows the numbers and types of animals Jessica saw.

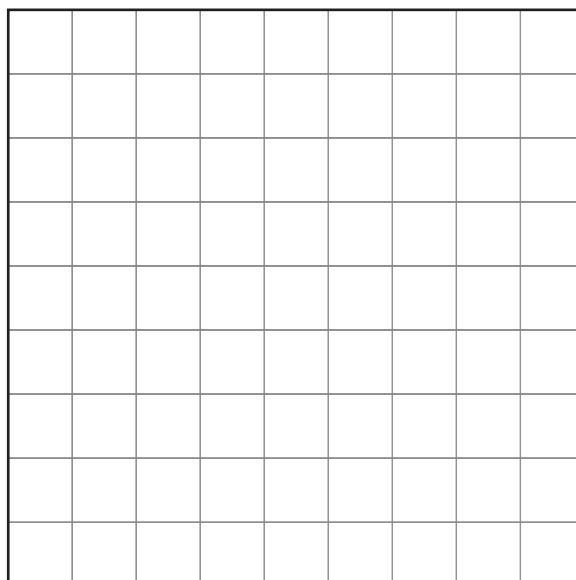
**ANIMALS AT THE PARK**

Animal	Number
Bird	<del>    </del>
Squirrel	
Dog	
Butterfly	

Using the information from the table, make a bar graph on the grid below to show all the animals Jessica saw.

Be sure to

- title the graph
- label the axes
- graph all the data
- use an appropriate scale



**38** Angela wrote the number sentence below:

$$4 \times 8 \times 16 = 16 \times 8 \times 4$$

Is this number sentence correct? Explain how you know whether or not this number sentence is correct without having to solve it.

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**39** Roberto has to read a book that is 84 pages long. He wants to read an equal number of pages each day.

**Part A**

How many pages per day would he need to read if he wanted to read the entire book in 2 days?

**Answer** \_\_\_\_\_ pages

How many pages per day would he need to read if he wanted to read the entire book in 3 days?

**Answer** \_\_\_\_\_ pages

**Part B**

Could Roberto read an equal number of pages each day for 5 days and finish the book? Explain why or why not.

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**STOP**



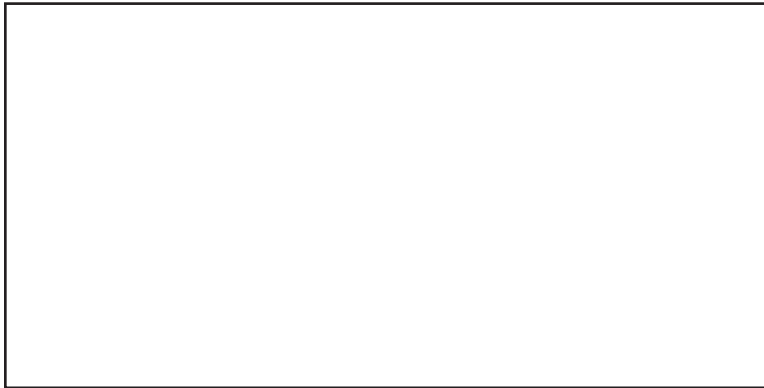
**Do NOT turn this page until you are told to do so.**

40



Use your counters to help you solve this problem.

On his paper, Randy drew the rectangle below.



**Part A**

Randy covered  $\frac{1}{2}$  of the rectangle with counters. How many counters did he use?

**Answer** \_\_\_\_\_ counters

**Part B**

What fraction of the rectangle would be covered using only 2 counters?

**Answer** \_\_\_\_\_

**41**

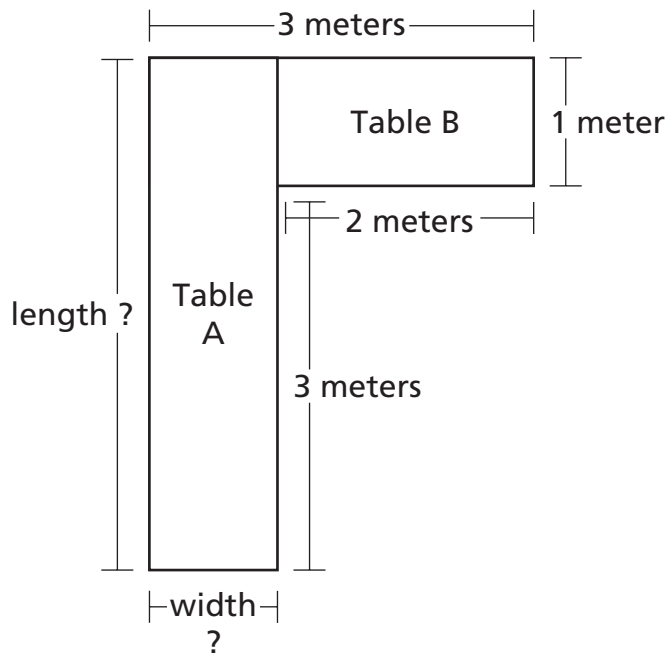
Kari and Jason are baking cookies for their 2 fourth-grade classes at school. Each class has 26 students. How many cookies should they bake to give 3 cookies to each student?

***Show your work.***

***Answer*** \_\_\_\_\_ cookies

***Go On***

Lucinda helped her teacher set up 2 tables for food at the school fair. The tables are touching each other as shown in the picture below.



### Part A

What is the length and the width of Table A ?

**Length** \_\_\_\_\_ meter(s)

**Width** \_\_\_\_\_ meter(s)

### Part B

Lucinda is going to decorate the outside edges of the joined tables, except where the tables are touching. What is the perimeter of the joined tables?

**Show your work.**

**Answer** \_\_\_\_\_ meters

43



Use your counters to help you solve this problem.

Ahmed's dog had 8 puppies.

Each puppy was either all black, all tan, or all white.

There were 2 black puppies.

There were twice as many white puppies as tan puppies.

**Part A**

How many white puppies did Ahmed's dog have?

**Answer** \_\_\_\_\_ white puppies

**Part B**

Explain how you found your answer.

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A sign at Neno's Market reads:



**Part A**

Which is the *least* expensive way to buy 5 apples at the market?

5 separate apples    *or*    1 bag of 5 apples

**Show your work.**

**Answer** \_\_\_\_\_

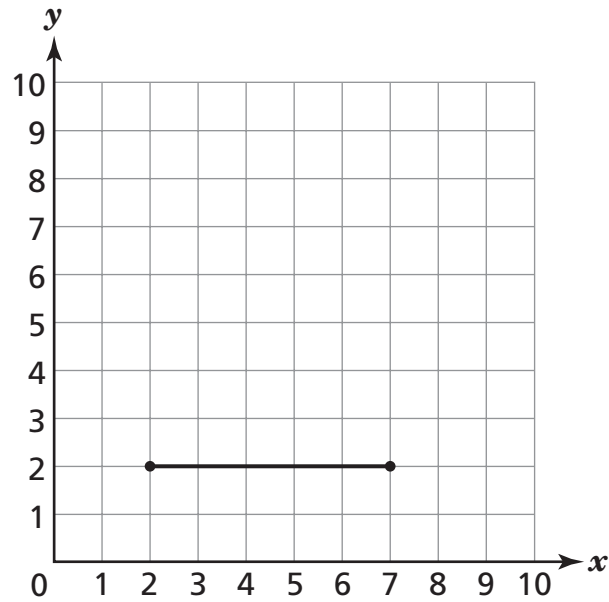
**Part B**

What is the *least* amount of money someone would need to buy exactly 12 apples?

**Show your work.**

**Answer** \$ \_\_\_\_\_

**45** The graph below shows one side of a square.



**Part A**

Plot the other 2 corner points of the square.

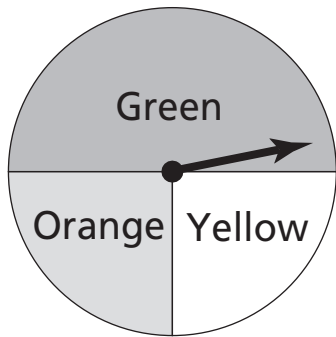
**Part B**

List the ordered pairs of the points you plotted.

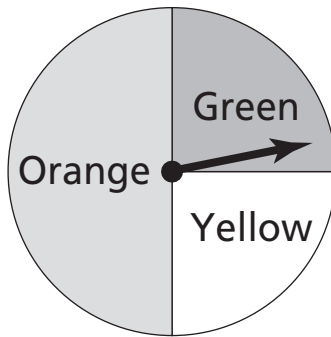
(\_\_\_\_, \_\_\_\_)

(\_\_\_\_, \_\_\_\_)

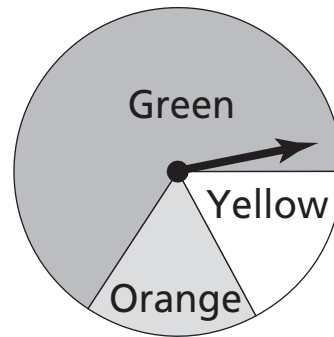
Maria will spin the arrow on one of the three spinners shown below. If the arrow stops on yellow or orange, she will win a prize.



Spinner A



Spinner B



Spinner C

Which spinner will give Maria the best probability of winning a prize?

**Answer** \_\_\_\_\_

On the lines below, explain why the spinner you chose will give Maria the best probability of winning a prize.

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Use your pattern blocks to help you solve this problem.

**Part A**

In the space below, make 1 triangle by tracing around 2 of your pattern blocks. The sides of your triangle must be exactly twice as long as the sides of the green pattern block.

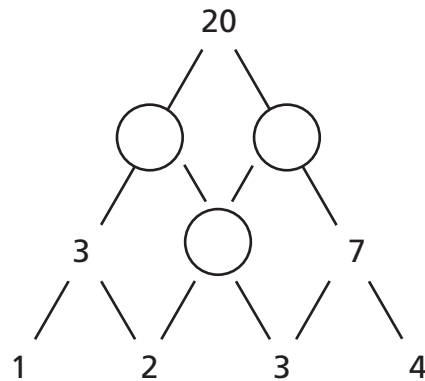
**Part B**

How many green pattern blocks would it take to cover a larger triangle that has sides exactly 3 times as long as the green pattern block?

**Answer** \_\_\_\_\_ green pattern blocks

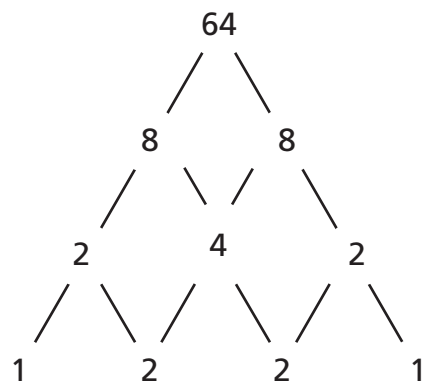
**Part A**

In the pattern below, every two numbers next to each other add up to the number above them. Complete the pattern by writing the missing numbers in the circles below.



**Part B**

On the lines below, describe the following pattern.




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**STOP**

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**Book 2**  
**Mathematics**  
**Grade 4**

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