



### Let's Write

(1.05)

What strategies do you use when playing Nutty Buddies? What would you do if you played again? Why?



### Seeing Math

Using pattern blocks how many different ways can you make a hexagon? Use blue parallelograms, trapezoids, and triangles. Record your shapes.

Do all hexagons look like the yellow pattern block? How do you know?

(3.01)



### What Do You Think?

(1.05)

Mr. Hill planted 20 tomato plants in rows of five each. How many rows did he plant? \_\_\_\_\_  
How do you know?

Write a problem about Stan planting 18 flowers.



### Investigations

When adding the dots on two number cubes, is there a most frequent sum?

Give each pair of students a pair of number cubes. Ask the students to take turns rolling them ten times each and adding the numbers. Have the students record their answers on a line plot. Have students report their results in class. Encourage the students to discuss how to compile their data into one large class graph. Play Nutty Buddies and watch to see how the students use their findings.

(4.02)



\$ ¢ ¢ ¢ ¢ ¢ ¢ ¢ ¢

(1.01a)

Martez got one dollar from the tooth fairy. He bought a yo-yo for 86¢. How much change did he get back?

What coins could he have for the change?

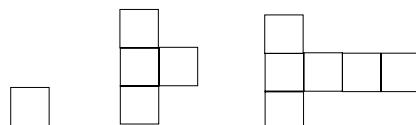
\_\_\_\_\_

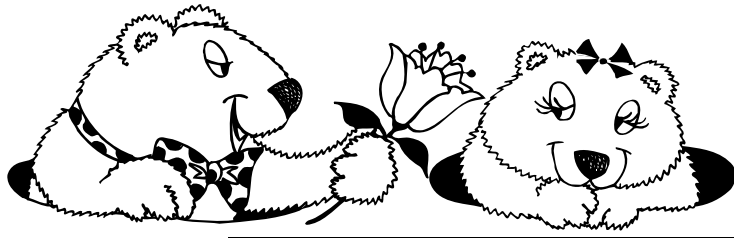


### Patterns, Patterns, Patterns

(5.01)

What shape comes next? How do you know?





# *Nutty Buddies*

	2	3	4
5	6	7	8
9	10	11	12

**Player 1**

**Rules:** Each player places 15 Unifix cubes on a game board (on any number). Players take turns rolling two number cubes and adding. At a turn a player may remove one cube from the sum. If there is no cube to take off the game board, the player loses a turn. The player who clears the game board first is the winner.

**Player 2**

5	6	7	8
9	10	11	12

(4.02)



# Keeping Skills Sharp

1. 
$$\begin{array}{r} 764 \\ - 42 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} 370 \\ - 220 \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 96 \\ + 14 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} 36 \\ + 48 \\ \hline \end{array}$$

5. 420, 400, 380, 360, \_\_\_\_\_

6. What is the time on this clock?



7. How many hundreds are in 318?

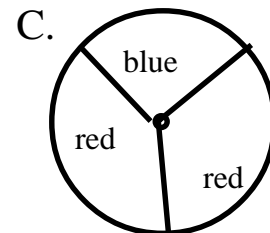
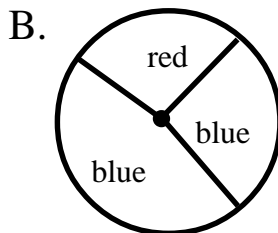
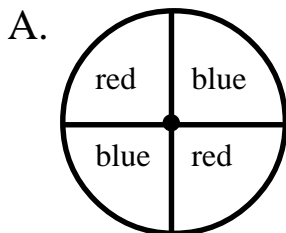
8. Luke has 30 pencils. He gives them to three friends. How many pencils will each friend get if each friend receives the same amount?



# Solve this!

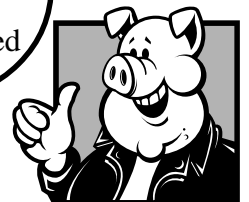
(4.02)

Jeff is playing a game with his friends. He gets more points if the spinner lands on red. He can choose the spinner he wants to use. Which spinner should he choose? \_\_\_\_\_ Why?



Spin each spinner ten times.

Record your results. Did your spins match your predictions?





# To the Teacher ..

Grade 2

WEEK  
29

## Investigations:

Probability is a part of the second grade curriculum. This activity will allow children to begin to see probability in their world. Discuss words like chance, likely, unlikely, probably, maybe, etc. with children as they begin to explore probability. Playing Nutty Buddies before and after this activity will give children an opportunity to apply what they have learned.

## Solve This:

Probability is a concept that second graders should explore. Relate probability to their world. Examples of comments are, "There's a 70% chance of rain today. It'll probably rain." "My mom will probably go to the grocery store this week." Also talk about things that will not happen. "My mom will probably not go to the moon this week." They can write statements about things that are likely and unlikely to happen. You can enlarge the spinners in this section. Using a paper clip to spin, have students spin and record their results. They can write about their predictions and actual results.

### **Mental Math**

Directions to Students: Number your paper from 1 to 10. Write your answers as the questions are called out. Each question will be repeated only once.

*Write the sum or difference.*

- |   |                           |
|---|---------------------------|
| 1. If $2 + 5 = 7$ , what is $20 + 50$ ? | 6. What is $40 - 5$ ?     |
| 2. If $4 + 1 = 5$ , what is $40 + 10$ ? | 7. What is $6 + 2 + 3$ ?  |
| 3. If $3 + 5 = 8$ , what is $30 + 50$ ? | 8. What is $7 + 4 - 2$ ?  |
| 4. If $5 + 2 = 7$ , what is $50 + 20$ ? | 9. What is $60 - 10$ ?    |
| 5. If $6 + 2 = 8$ , what is $60 + 20$ ? | 10. What is $3 + 9 + 1$ ? |

### **Keeping Skills Sharp**

722	340
150	12:35
110	3
84	10



### Let's Write

(1.05)

Write a story about planting a garden. How many rows will be in your garden? How many plants in each row? How many plants in all?



### Seeing Math

Show, with drawings, two different ways LaToya and Jerome could cut their pizzas. Will it matter if the pizzas are round or rectangular?

(1.02a, c)



### What Do You Think?

(1.05)

Farmer Brown wants to put 12 plants in his garden. He wants to plant the same number of carrots and lettuce plants. He wants to plant twice as many tomato plants as carrot plants. Draw a picture to show what Farmer Brown's garden might look like.



Joe knows that all insects have six legs and all frogs have four legs. One day, Joe was at the pond and he counted a total of 22 legs. How many frogs and how many insects did Joe see?



### Investigations

LaToya and Jerome are having four friends over for pizza. There will be six children, including LaToya and Jerome. Each child wants three slices. How many whole pizzas do they need?

How will the pizzas be cut into equal fractional pieces ?

(1.02d)



\$ ¢ ¢ ¢ ¢ ¢ ¢ ¢ ¢

Muffins cost 43 cents each. Show three different ways you can pay for one muffin. Use the exact amount.

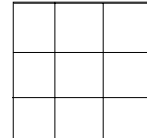
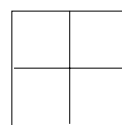
If you gave the clerk \$1 how much change should you receive?

(1.01a)



### Patterns, Patterns, Patterns

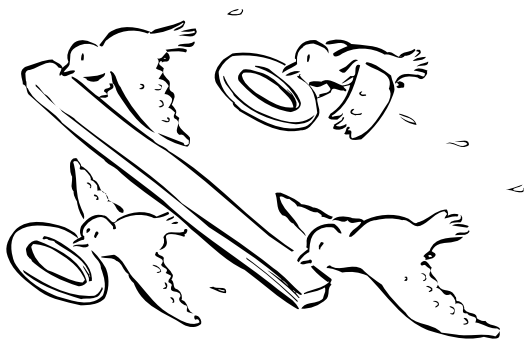
Draw the fourth shape. What is the rule?



(5.01)

# Closest to 100

**Goal:** To get as close to 100 cubes as possible in exactly six spins without going over



## Materials:

- a pencil with paper clip for a spinner
- connecting cubes grouped in ones and tens

## Directions:

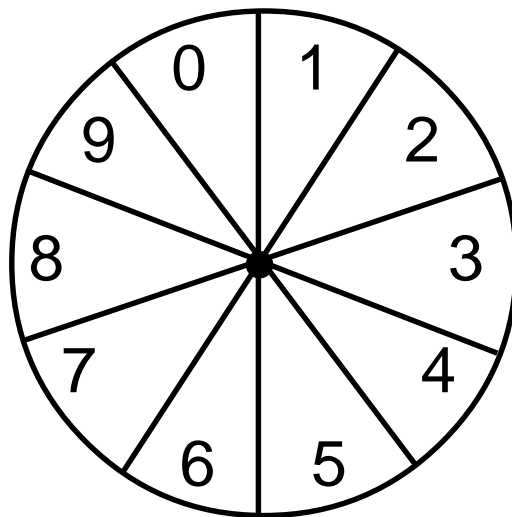
1. Each player makes a chart like this one.
2. Spin six times. (All players share the same six spins.)
3. After each spin, players take either that number of ones or tens from the pile of cubes. Then, players record the number taken on their charts.

*Example:* You spin 7.

You can take 7 ones and record 7 or you can take 7 tens and record 70.

4. The player who has the most connecting cubes after six spins, but not more than 100, wins.

Spin	Tens	Ones
1		
2		
3		
4		
5		
6		
<b>Total</b>		



(1.01 f)



# Keeping Skills Sharp

1. 
$$\begin{array}{r} 764 \\ + 42 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} 370 \\ + 220 \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 94 \\ - 19 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} 136 \\ - 48 \\ \hline \end{array}$$

5. 420, 419, 417, 414, 410, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

6. What is the time on this clock?



7. How many tens are in 318?

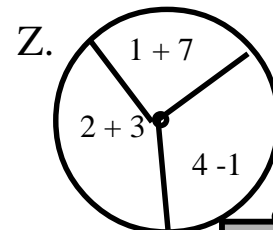
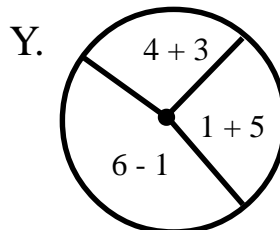
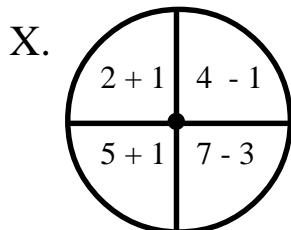
8. Sara had some pencils. She gave five pencils to each of three friends. She now has two pencils. How many did she start with?



# Solve this!

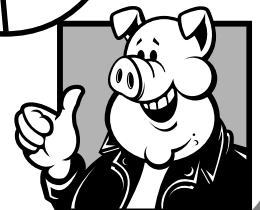
(4.02)

Donna is playing a game with her brothers. She gets more points if the spinner lands on an even number. She can choose the spinner she wants to use. Which spinner should she choose? \_\_\_\_\_ Why?



Spin each spinner ten times.

Record your results. Did your spins match your predictions?



# To the Teacher ..

## Seeing Mathematics:

Exploring the different configurations that will solve the pizza problem will introduce students to the variety of ways equal parts can be used to solve this problem.

## Solve This:

Probability is a concept that second graders should explore. Relate probability to their world. Examples of comments are, “There’s a 70% chance of rain today. It’ll probably rain.” “My mom will probably go to the grocery store this week.” Also talk about things that will not happen. “My mom will probably not go to the moon this week.” They can write statements about things that are likely and unlikely to happen. You can enlarge the spinners in this section. Using a paper clip to spin, have students spin and record their results. They can write about their predictions and actual results.

## Mental Math

Directions to Students: Number your paper from 1 to 10. Write your answers as the questions are called out. Each question will be repeated only once.

*Write the sum or difference.*

- |   |                           |
|---|---------------------------|
| 1. If $2 + 5 = 7$ , what is $20 + 50$ ? | 6. What is $40 - 5$ ?     |
| 2. If $4 + 1 = 5$ , what is $40 + 10$ ? | 7. What is $6 + 2 + 3$ ?  |
| 3. If $3 + 5 = 8$ , what is $30 + 50$ ? | 8. What is $7 + 4 - 2$ ?  |
| 4. If $5 + 2 = 7$ , what is $50 + 20$ ? | 9. What is $60 - 10$ ?    |
| 5. If $6 + 2 = 8$ , what is $60 + 20$ ? | 10. What is $3 + 9 + 1$ ? |

## Keeping Skills Sharp

806	405, 399, 392
590	
75	10:15
88	31
	17





(1.05)

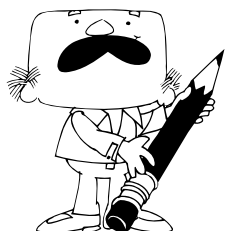
### Let's Write

Write a story about what you think a second graders' allowance should be and how you would spend it.



### Seeing Math

Use tangrams pieces to design a puzzle. Trace it and name it. Let a friend solve your puzzle.



(3.01)



(1.01a)

### What Do You Think?

Mario's mother promised to pay him 10 cents a day for making his bed. How many days would Mario have to work to save enough money to buy a model car that costs 75 cents?

Make a display to show the number of ways Mario could have 75¢ if he had 15 or fewer coins.

Mario's sister has five model cars in her collection. Is the value of her collection more or less than \$5? Explain how you know.



### Investigations

Is it fair?

Two players, one pair of number cubes.

One player is **odd**, the other **even**. Roll the cubes. If the sum is an odd number, odd gets one point, if it is an even number, even gets one point. Toss thirty times and record the points.

Is this game fair?

Explain your thinking.

(4.02)



\$ ¢ ¢ ¢ ¢ ¢ ¢ ¢

Toni has six coins in her pocket. She has at least one quarter, one dime and one penny. What could she have in her pocket? Show at least three solutions.

(1.01a)



### Patterns, Patterns, Patterns

Color the "one" square on a hundred board, then color the eleventh square after the one square. Continue coloring every eleventh square. Write about the pattern.

(5.01)

# Bone Up

**Directions:** Use with two sets of number tiles (0-9). Take turns drawing a tile and filling a bone. Try to build the largest number. You must fill one bone before going to the next one. You may not move a tile after it has been placed. You may vary the game by building the smallest number.

**Player 1**

**Player 2**

100's	Tens	Ones
___	___	___

100's	Tens	Ones
___	___	___

100's	Tens	Ones
___	___	___

100's	Tens	Ones
___	___	___

100's	Tens	Ones
___	___	___

100's	Tens	Ones
___	___	___

100's	Tens	Ones
___	___	___

100's	Tens	Ones
___	___	___

100's	Tens	Ones
___	___	___

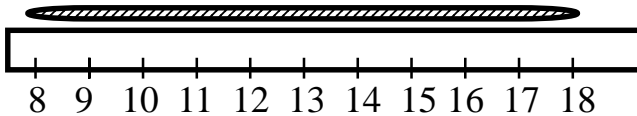
100's	Tens	Ones
___	___	___

(1.01 f)



# Keeping Skills Sharp

1. seventy-one = \_\_\_\_\_
2. eighty-nine = \_\_\_\_\_
3. seventeen dollars = \_\_\_\_\_
4. eleven dollars = \_\_\_\_\_
5. 219, 217, 215, 213, \_\_\_\_\_
6. Dana has only a broken ruler to measure the string.  
How long is it?



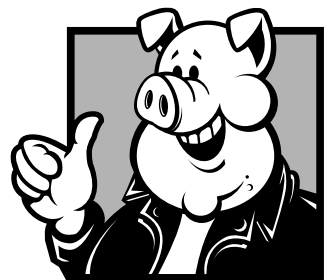
7. 2 tens + 4 hundreds + 1 hundred = \_\_\_\_\_
8. 5 cows = \_\_\_\_\_ legs



# Solve this!

(1.05)

Piggy Pig bought four baskets of apples. One basket had 30 apples. The second basket had half as many. The third basket had 16 apples and the last basket had twice as many as the third basket. He needs ten apples to make a pie. How many pies can he bake for the picnic?





# To the Teacher ..

Grade 2

WEEK  
3 1

## Investigations:

As students explore the sums and examine the addends ask them if they can predict the sum if the addends are even, the addends are odd, or there is one of each.

## Patterns, Patterns, Patterns:

Provide a Blackline Master of a hundred board for each student.

## Game of the Week:

“Bone Up”

Number tiles are in the Blackline Master section. Demonstrate this game by drawing from a bag of tiles and placing the tiles in the ones, tens, or hundreds place. Have the students also play as you draw tiles. They can draw lines ( \_\_\_ \_\_\_ \_\_\_ ) on paper and write the number in the blank. After three draws, see who made the largest three-digit number. After a number tile is placed or a number is written, it cannot be changed.

## Mental Math

Directions to Students: Number your paper from 1 to 10. Write your answers as the questions are called out. Each question will be repeated only once.

*Write the sum or difference:*

- |                   |                   |
|-------------------|-------------------|
| 1. $30 + 40 + 10$ | 6. $75 - 25$      |
| 2. $90 + 20$      | 7. $80 - 10 - 10$ |
| 3. $80 + 5 + 5$   | 8. $16 - 8$       |
| 4. $40 - 10$      | 9. $60 - 80$      |
| 5. $62 - 10$      | 10. $50 + 15$     |

## Keeping Skills Sharp

- |      |     |
|------|-----|
| 71   | 211 |
| 89   | 10  |
| \$17 | 520 |
| \$11 | 20  |



(1.05)

### Let's Write

My frog eats eight flies each day. Write a story about how many flies it eats in four days.



### Seeing Math

Give students two unlined index cards each. Have them divide the first card into four equal parts. Color two parts red. Divide the second card into four equal parts *another way*. Color two parts blue.

Are the blue parts the same size as the red parts? How do you know?

(1.02)



### What Do You Think?

Both rabbits and turtles like to eat lettuce. Each day Sharon gives four leaves of lettuce to her rabbits and two leaves of lettuce to her turtles. When Sharon has given 20 leaves of lettuce to her rabbits, how many leaves of lettuce will she have given to the turtles?

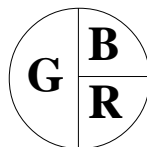
Day	1	2	3	4	5	6
Leaves for rabbits						
Leaves for turtles						

(1.05)



### Investigations

Sam made a spinner that looks like this:



G - Green

B - Blue

R - Red

If you spin the spinner 20 times, which color do you think will come up the most? Try it and see. Record your results. Compare your graph with other students' experiments.

Why do you think you found the results of the experiments that you did?

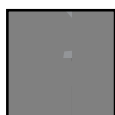
(4.02)



\$ ¢ \$ ¢ \$ ¢ \$ ¢

Mrs. Turtle felt in her pocket. She had 30¢, but she did not have any pennies. What coins could she have?

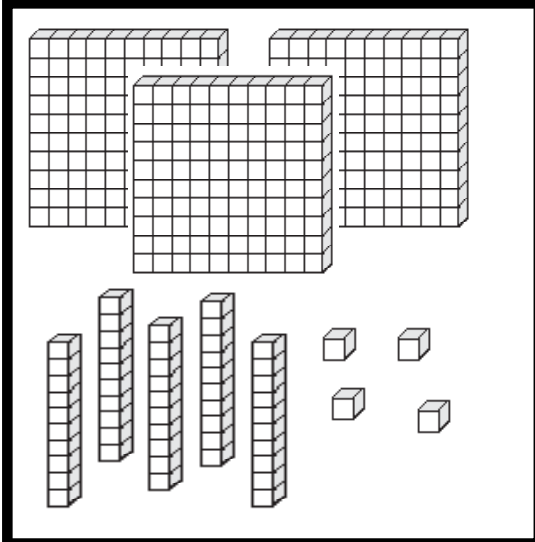
(1.01a)



(5.01)

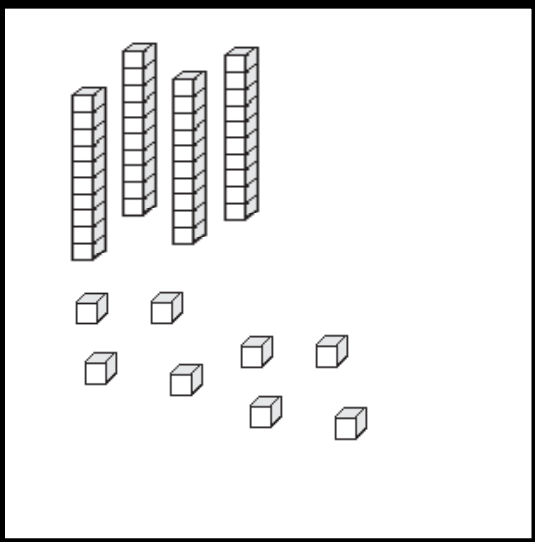
### Patterns, Patterns, Patterns





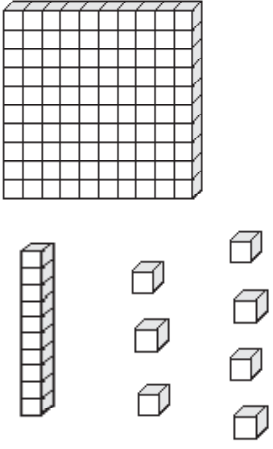
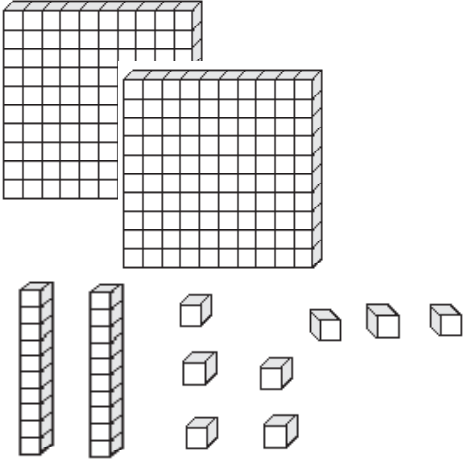
**three hundred  
fifty-four**

**354**



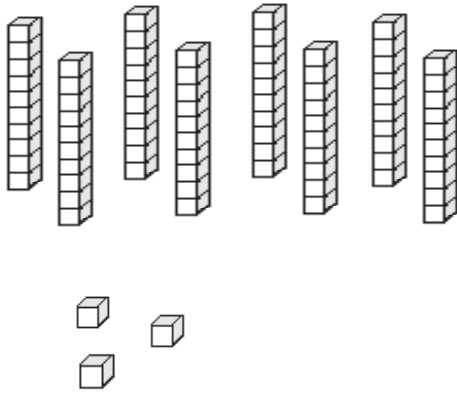
**forty-eight**

**48**

<p><b>117</b></p>	<p><b>one hundred seventeen</b></p>	
<p><b>228</b></p>	<p><b>two hundred twenty-eight</b></p>	

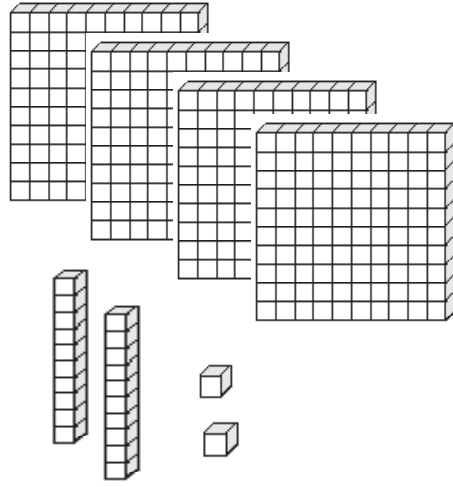
**83**

**eighty-three**



**422**

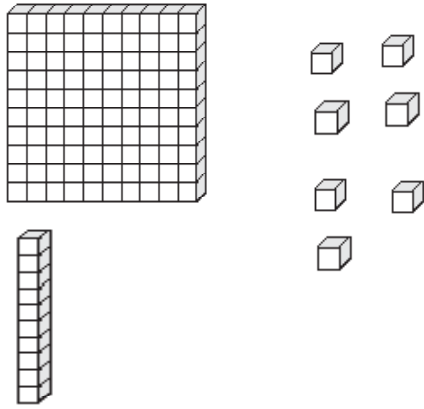
**four hundred  
twenty-two**





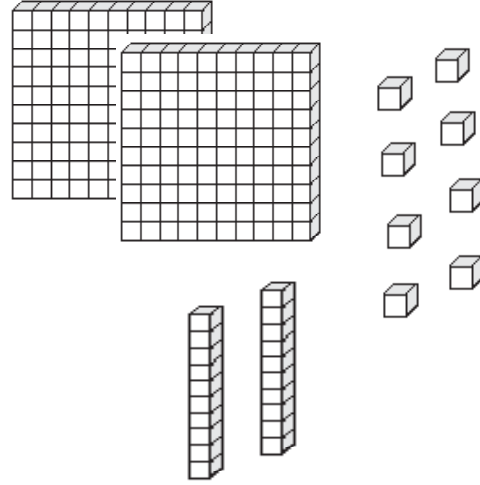
**117**

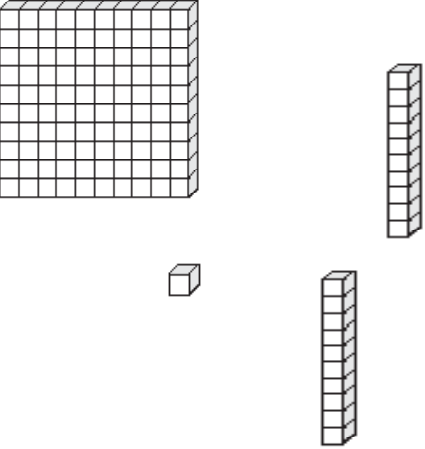
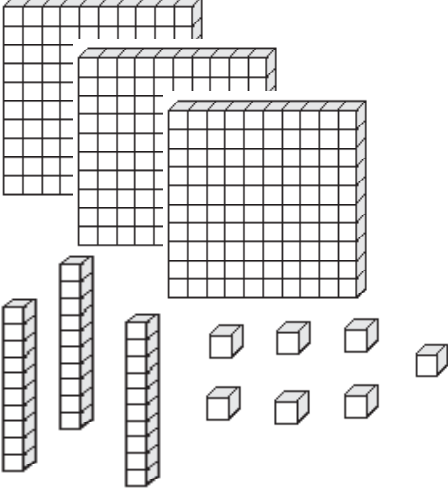
**one hundred  
seventeen**

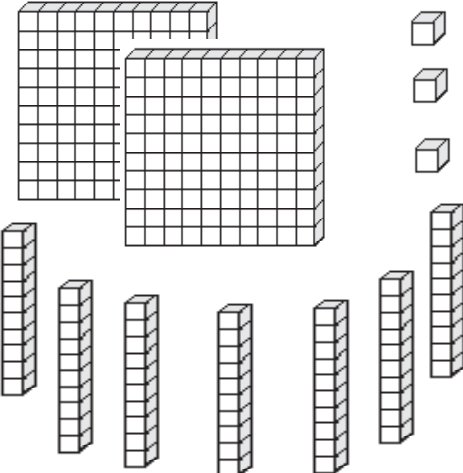
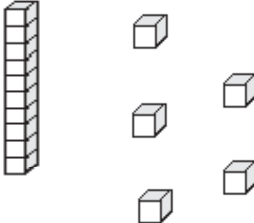


**228**

**two hundred  
twenty-eight**



<p><b>121</b></p>	<p><b>one hundred</b> <b>twenty-one</b></p>	
<p><b>337</b></p>	<p><b>three hundred</b> <b>thirty-seven</b></p>	

<p><b>273</b></p>	<p><b>two hundred seventy-three</b></p>	
<p><b>15</b></p>	<p><b>fifteen</b></p>	



# Keeping Skills Sharp

1.  $20 + 50 + 36 = \underline{\quad}$

2.  $29 + 32 + 12 = \underline{\quad}$

3. 
$$\begin{array}{r} 78 \\ - 32 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} 142 \\ - 21 \\ \hline \end{array}$$

5. 8:30, 9:00, 9:30, 10:00,  $\underline{\quad}$

6. What time is it?



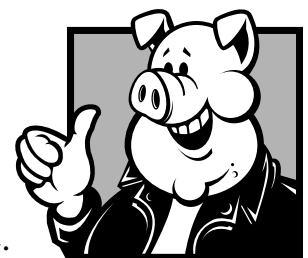
7. How many tens are in 436?  $\underline{\quad}$

8. Kathy had some stamps on Monday. Her mom gave her 36 more stamps for her birthday. Now she has 90 stamps. How many stamps did she have on Monday?



# Solve this!

These are function machines. A number goes into the machine and another number comes out. Each machine has a different rule. Complete the missing numbers and write the rule.



in	out
410	400
65	55
132	$\underline{\quad}$
$\underline{\quad}$	87

rule  $\underline{\quad}$

in	out
501	$\underline{\quad}$
618	620
300	$\underline{\quad}$
$\underline{\quad}$	41

rule  $\underline{\quad}$

in	out
187	87
209	109
$\underline{\quad}$	411
736	$\underline{\quad}$

rule  $\underline{\quad}$

(5.01)



# To the Teacher ..

Grade 2

WEEK  
32

**Game of the Week:** Number Concentration.

Lay your concentration cards face down in five rows of six each. Players take turns turning over the cards. The number must be matched with the number word and the picture of the number. Three cards make a match. Before playing the game by the rules, children could turn the cards face up and make matches. **(1.01f)**

**What Do You Think?**

Having children make charts is a good problem-solving technique. This is a similar problem you could use. Some second grade students like to jump rope. It takes two children to turn a jump rope. How many children would you need to turn 10 jump ropes? What if you had 20 ropes? Make a table and look for a pattern.

Ropes	Children
1	2
2	4
3	6
4	

## Mental Math

Write the number between:

- |                |                 |
|----------------|-----------------|
| 1. 348 and 350 | 6. 142 and 144  |
| 2. 221 and 223 | 7. 530 and 532  |
| 3. 191 and 193 | 8. 426 and 428  |
| 4. 87 and 89   | 9. 106 and 108  |
| 5. 265 and 267 | 10. 374 and 376 |

Directions to Students: Number your paper from 1 to 10. Write your answers as the questions are called out. Each question will be repeated only once.

## Keeping Skills Sharp

- |     |       |
|-----|-------|
| 106 | 10:30 |
| 73  | 6:15  |
| 46  | 43    |
| 121 | 54    |