Chapter 4

Exploring Addition and Subtraction

Add in Any Order 🖍

Put some counters on each plate.

STEP 1 **Counting**

How many counters are on the left plate? _____

How many counters are on the right plate? _____

STEP 2 **Finding the Total**

How many counters are there in all? _____

Explain how you found the total.

_____

STEP 3 **Adding in Another Order**

Switch the plates so that the left one is on the right.

How many counters are there in all now? _____

How does this compare to the answer in Step 2?

_____

Why do you think the totals are the same?

_____

_____

Investigation

Dear Family,

Today we started Chapter 4 of *Think Math!* In this chapter, I will use stories and puzzles to learn about addition and subtraction. There are NOTES on the Lesson Activity Book pages to explain what I am learning every day.

Here are some activities for us to do together at home. These activities will help me learn to add and subtract.

Love,

_____

Family Fun
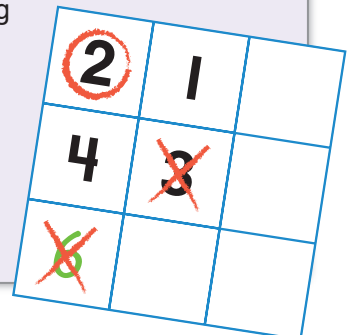
Missing Number

Work with your child to identify a missing number of items.

- Two players need exactly 10 paper clips or other small objects for this game. Set the 10 objects on a table.

- One player hides some of the 10 objects in his or her hand and challenges the other player to tell how many objects are hidden.

- By counting the number of objects left, the player determines the number of hidden objects.

- If the number is correct, that player scores 1 point.

- Players take turns. The first player to get 10 points wins!

Tic-Tac-Add

Work with your child to add two numbers.

- Draw a tic-tac-toe board with the numbers 1, 2, 3, and 4 in the four squares of the top left corner.

- Assign your child to be X and to go first. Players take turns and follow the rules of tic-tac-toe with one modification: if a player wants to mark a square without a number, he or she must add the two numbers in the row, column, or diagonal and write the sum on the game board first before marking an X or O.

- Play continues until one player makes tic-tac-toe or the game ends in a tie. Players can play again by marking the upper left squares of a new board with the numbers 2, 3, 4, 5; 1, 1, 2, 4; or 2, 2, 4, 5 or any other combination of four numbers less than 5.
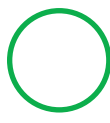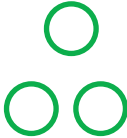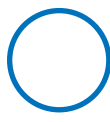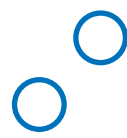
Chapter 4
Lesson 1

Introducing the Cross Number Puzzle

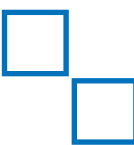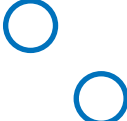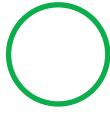NCTM Standards 1, 2, 3, 6, 8, 9, 10

What numbers are missing?

1.

	LARGE	small
Green	◯	◯ ◯ ◯
Blue	◯	◯ ◯

➡
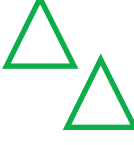
	LARGE	small
Green	1	3
Blue		

2.

	□	◯
LARGE	□ □	◯
small	□	◯ ◯

➡

	□	◯
LARGE		
small		

3.

	LARGE	small
◯	◯	◯
△	△ △	△ △

➡

	LARGE	small
◯		
△		

NOTE: Your child is learning to sort shapes, count them, and record the numbers in a table. This prepares children for exploring addition and subtraction in later lessons.

4. What numbers are missing?

	Green	Blue
LARGE	△△	△
small	△ △△	△△ △△

→

	Green	Blue
LARGE		
small		

---

5. Make your own.

	△	○
Green		
Blue		

→

	△	○
Green		
Blue		
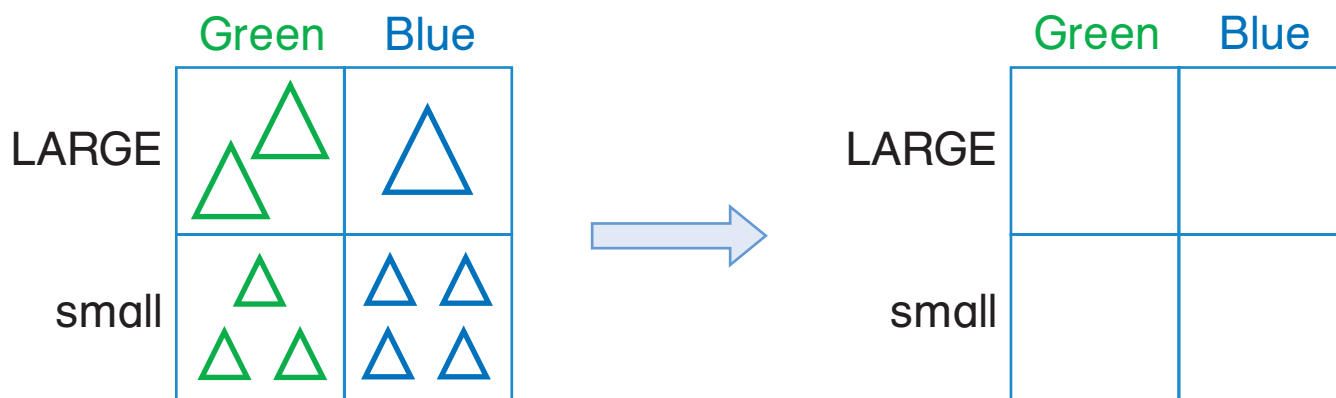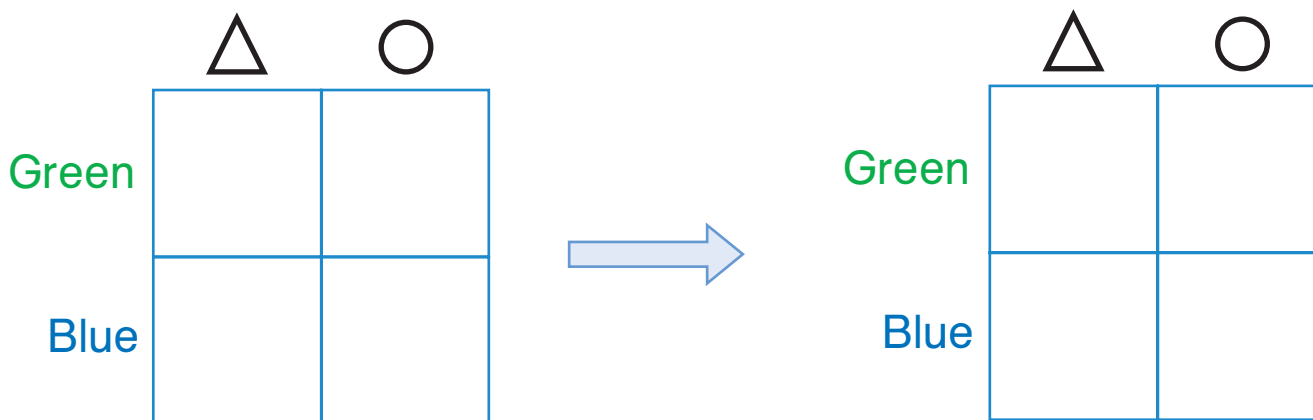
Challenge

6. What figures are missing?

	○	□
small		
LARGE		

→

	○	□
small	3	4
LARGE	1	2
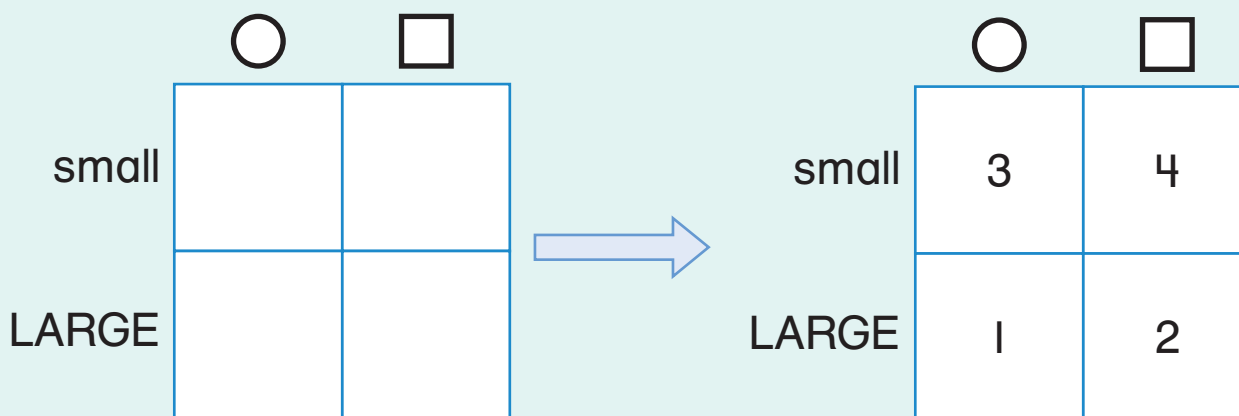
Using Cross Number Puzzles to Add

NCTM Standards 1, 2, 3, 6, 8, 9, 10

Complete each puzzle.

1.
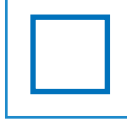
2.

LARGE small

3.

Blue   Green
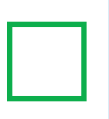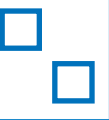
LARGE

small

NOTE: Your child is learning to count objects in a grid and to record the numbers in a Cross Number Puzzle. In these puzzles, sums of objects in rows and columns are recorded in the bottom row and in the right column.

4. What are the missing numbers?

	L	**T**
Green	L L L	T T
Blue	L L L L L	T T T T

→

3		

---

5. What are the missing letters and sums?

	Green	**Blue**
M		
W		

→

4	2	
3	0	

Challenge

6. What are the missing numbers and shapes?

	Green	**Blue**
○		
□		

→

3	2	
	4	6

Name _____ Date _____

Exploring Missing Addends

NCTM Standards 1, 2, 6, 7, 8, 9, 10

Fill in the missing pictures and numbers.

Use the numbers in the puzzles to decide how many to draw.

1.

3	1	4
2	0	

2.

1		
3	1	
	5	

3.

2	1	
	3	4
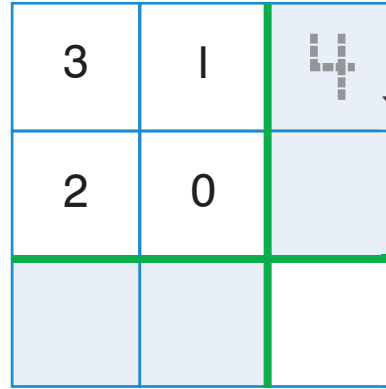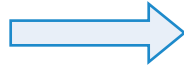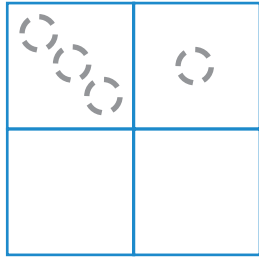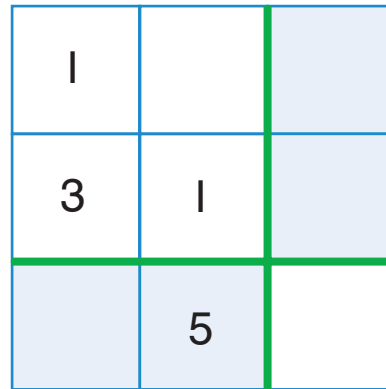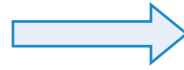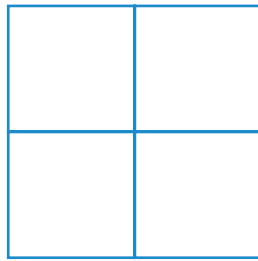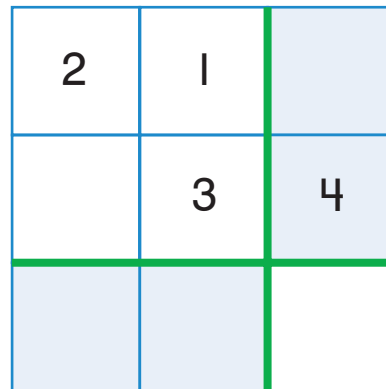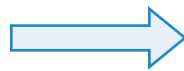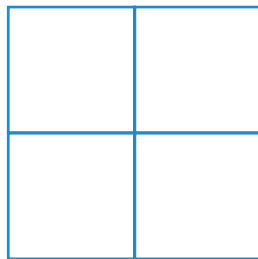
NOTE: Your child is using reasoning skills to complete Cross Number Puzzles. The numbers in the puzzle match the number of circles in the 2-by-2 grid. Ask your child to explain how to solve each puzzle.

What are the missing numbers?

4.

	2	3
0		2
1		

	2	3
0		2

	2
0	
——	——
1	

5.

3		7
	1	
4		

3		7
	1	

3	
	1
——	——
4	

Problem Solving

6. Trey has 9 pieces of fruit. How many of each kind does he have?

	red	green	
grapes			5
apples		1	
	3		9

red grapes ____   green grapes ____

red apples ____   green apples ____

Chapter 4

Lesson 4

Practice with Cross Number Puzzles

What numbers are missing?

1.
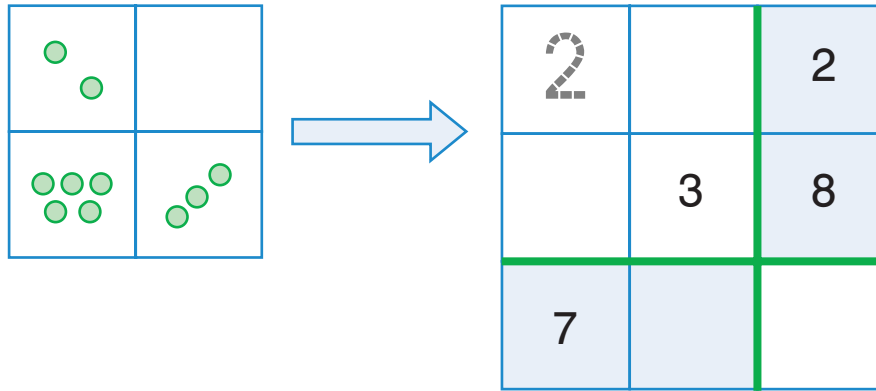
2.
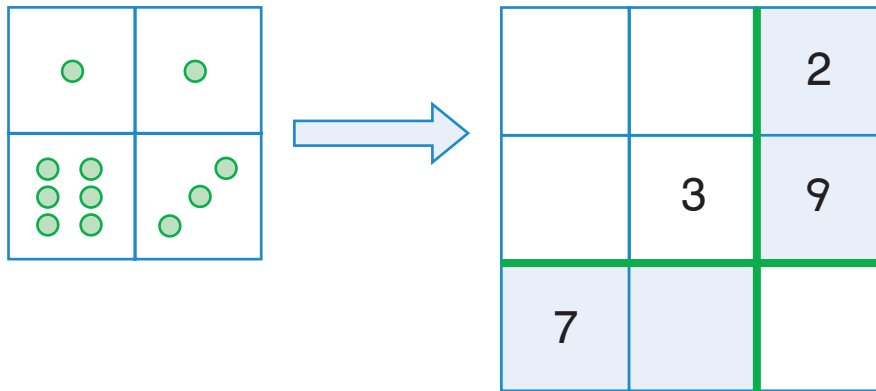
3.
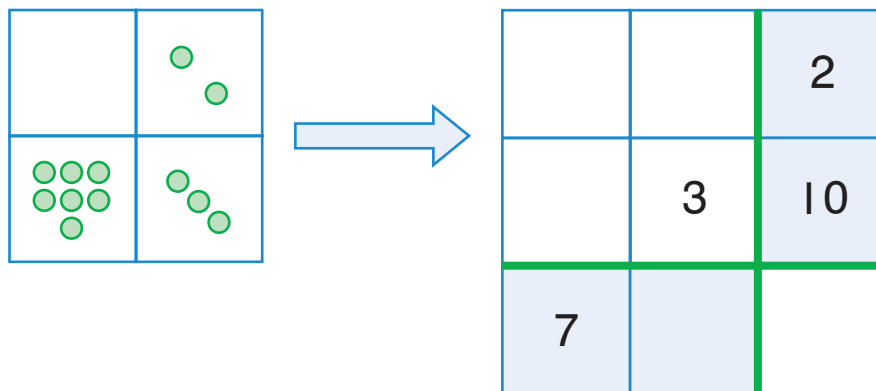
NOTE: Completing the Cross Number Puzzles on these pages helps your child develop problem solving skills.

What numbers are missing?

4.

2	1	3
3		6

5.

		4
1		
2	5	

6.

	3	5
	4	10

7.

0		2
3		11

Challenge

8. Jill made her own Cross Number Puzzle. How can you complete it?

		3
	4	
5		

_____

_____

_____

_____

_____

Chapter 4
Lesson 5

Sums of 10

NCTM Standards 1, 2, 6, 8, 9, 10

I. Which are sums of 10?

Circle them as fast as you can.

Sums of 10 Search

(3 7)	3 8	2 8
4 7	10 0	10 1
4 6	9 0	1 9
5 6	8 2	8 3
5 5	7 3	9 1
6 4	7 4	8 4
6 3	3 6	0 10

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NOTE: Your child is learning to quickly recognize pairs of numbers with a sum of 10. On page 70, children use Cross Number Puzzles to see that numbers can be added in any order and still have the same sum.

Complete each puzzle. Use the puzzle to complete the number sentence.

2.

0	1	1
0	9	
0	10	10

0 __10__ 1 ___

3.

	2	2
	8	10

___ 8 2 ___

4.

1		
	2	
4		10

4 ___ ___ ___

5.

		3
	5	
4		10

4 ___ 3 ___

Challenge

6. Make a puzzle for this picture.

Blue

Green

Chapter 4
Lesson 6
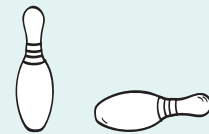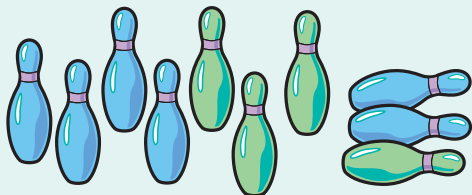
Addition Stories

NCTM Standards 1, 2, 6, 7, 8, 9, 10

Solve each problem.

1. 5 children played tag.
2 more joined the game.
How many children are
playing tag now?

_____ children

Use words,
numbers, or pictures
to show how you
solved it.

2. Some children are in the classroom.
6 are boys.
3 are girls.
How many children are
in the classroom?

_____ children

NOTE: Your child is learning to solve addition story problems.
You may wish to pose an addition problem about objects or
people in your house and ask your child to solve it.
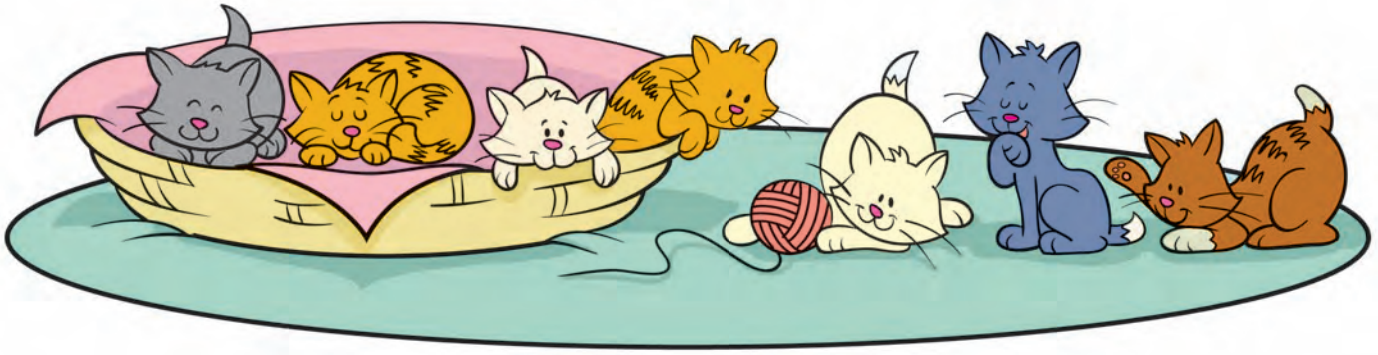
✏️ **Write an addition story about the kittens.**

3. _____

_____

_____

_____

_____

_____

4. Solve your story problem. Use words, numbers, or pictures to show how you solved it.

Chapter 4
Lesson 7

Subtraction Stories

NCTM Standards 1, 6, 7, 8, 9, 10

Use words, numbers, or pictures to show how you solved it.

Solve each problem.

1. 7 children played tag.
2 went home.
How many children are playing now?

_____ children

2. 9 children are in the classroom.
6 are boys.
How many are girls?

_____ girls

NOTE: Your child is learning to solve subtraction story problems. You may wish to ask your child to compare two groups of objects in your house. For example, how many more apples do we have than bananas?
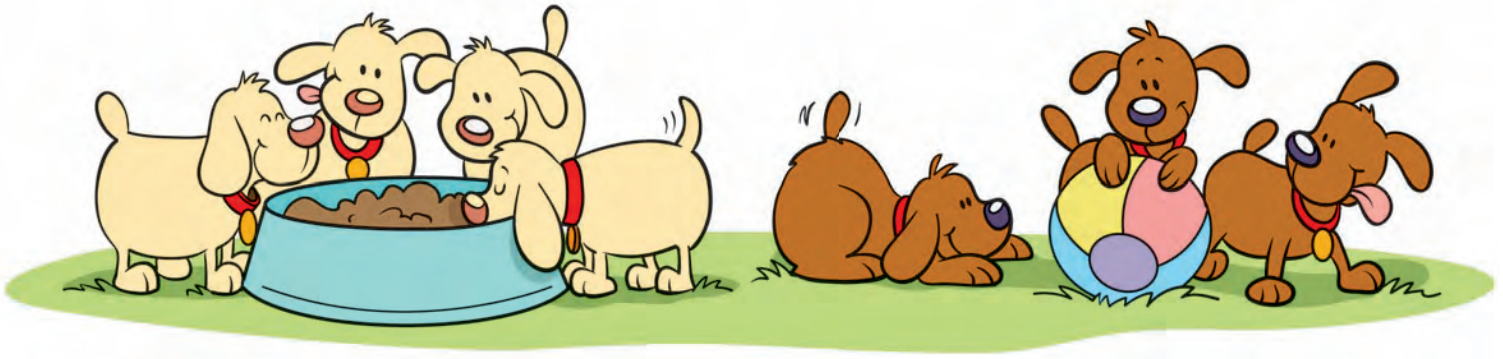
✏️ **Write a subtraction story about the puppies.**

3. _____

_____

_____

_____

_____

_____

4. Solve your story problem. Use words, numbers, or pictures to show how you solved it.

Name _____   Date _____

Problem Solving Strategy
Guess and Check ✏️
NCTM Standards 1, 2, 6, 7, 8, 9, 10

Understand
Plan
Solve
Check

1. There are 6 birds in a tree.
Some are robins and the rest are sparrows.
There are 2 more sparrows than robins.
How many robins are in the tree?

_____ robins

2. Paul has 7 coins in his pocket.
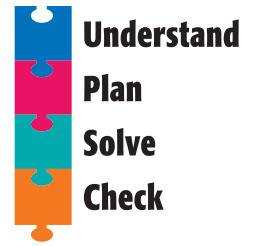He only has nickels and pennies.
The coins are worth 15¢.
How many of each type of coin does Paul have?

_____ nickels

_____ pennies

3. Reyna sorts 8 triangles by size.
She has the same number of large
triangles as small triangles.
How many of each size does Reyna have?

_____ small triangles

_____ large triangles

NOTE: Your child is exploring different ways to solve problems. Sometimes guessing and checking is an efficient way to solve a problem.

Problem Solving Test Prep

1. Justin made a pattern with figures.

△ □ □ ○ △ □ □ □ ○ △ □ ___ ○

Which figure is missing?

Ⓐ △

Ⓑ □

Ⓒ ○

Ⓓ ▭

2. Deandre had 1 nickel and 3 pennies.
Then he earned 10¢.
How much money does he have now?

Ⓐ 10¢

Ⓑ 15¢

Ⓒ 18¢

Ⓓ 23¢

✏️ Show What You Know

3. Fiona has some nickels and pennies. She has 11¢ in all. How many of each type of coin could she have?

_____ nickels

_____ pennies

Explain how you know your answer makes sense.

_____

_____

_____

4. Kelly, Josh, and May are in line.
Kelly is in front of Josh.
May is right behind Kelly.
Who is first?

_____ is first.

Explain how you know your answer is correct.

_____

_____

_____

_____

1. What figures are missing? Lesson 1
What numbers are missing?

	LARGE	small
△	△	
□		□ □ / □ □

→

	LARGE	small
△		3
□	I	

2. What numbers are missing? Lesson 2

	B	D
Blue	B B B	D D D
Green	B B	D

→

3. What numbers are missing? Lesson 3

	3	7	
2			
			9

3   7
2   2

3

2

3

2

What numbers are missing? Lessons 4 and 5

4.

		5
	4	
	7	9

5.

3		8
5		10

Solve each problem. Lessons 6 and 7

6. Marcy picked 4 tulips.
Her mother gave her 5 roses.
How many flowers does Marcy
have now?

_____ flowers

7. There are 10 boys in the park.
Four are on the playground.
The rest are on the grass.
How many are on the grass?

_____ boys

Problem Solving Lesson 8

8. Mark sees some frogs and turtles.
He sees 5 animals in all.
There is 1 more frog than there are turtles.
How many of each kind of animal
does Mark see?

_____ frogs

_____ turtles