Name _____

Building Addition and Subtraction Fluency

## Exploring Related Number Sentences

How can two number sentences be related?

STEP 1 **Observing**

Turn over two cards from the pile. Are the number sentences related? Explain.

$5 + 7 = 12$

_____

_____
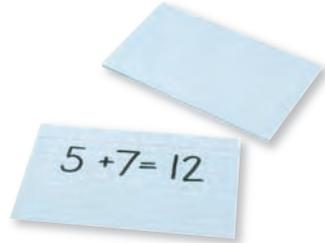
STEP 2 **Observing Some More**

Pick another card, and put it with the other two.
Do you see any related sentences now? Explain.

_____

_____

STEP 3 **Writing Related Sentences**

Pick one of your cards. Write a related
number sentence. How are they related?

_____

_____

_____

_____

Investigation

Dear Family,

Today we started Chapter 8 of *Think Math!* In this chapter, I will develop my ability to add and subtract bigger numbers. 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 understand addition and subtraction.

Love,

_____

Family Fun

Race to 100!

Play this game with your child. Your child will play this game in Lesson 6.

- Prepare two gameboards like this. You also need two number cubes.

| I already have...	The sum of the numbers tossed is...	My new total is...
0		

- Players alternate turns. For each turn, toss the number cubes and add the two numbers. Record the sum in the middle column. Add the first two columns together and record that sum in the third column. Copy the "new total" into the first column of the row for the next turn.

- The winner is the first player to reach 100 in the "new total" column.

What Makes a Number

Work with your child to find addition problems for a given number.

- On index cards or slips of paper, write a variety of two-digit numbers, one per card.

- Place the cards face down in a pile, and have your child choose one card. Together, name two numbers that when added together make the number on the card. Write an addition sentence for your numbers.

51    $25 + 26 = 51$
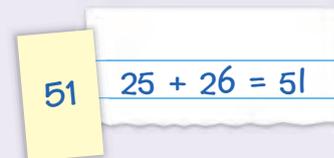
- Repeat, reusing cards if you want. If cards are reused, challenge your child to come up with a different addition sentence for the number.

Adding with Cuisenaire® Rods

NCTM Standards 1, 2, 4, 6, 7, 8, 9, 10

What are all the possible 2-car trains?

1. [R]

W _____ _____

2. [G]

R _____ _____

_____ _____

3. [P]

R _____ _____

_____ _____

_____ _____

What are all the possible 3-car trains?

4. [G]

W _____ _____ _____

5. [P]

R _____ _____ _____

_____ _____ _____

_____ _____ _____

6. [Y]

_____ _____ _____

_____ _____ _____

_____ _____ _____

_____ _____ _____

_____ _____ _____

_____ _____ _____

7. How many different rod trains can you make?

Rod Color	2-Car Trains
red	I
green	
purple	

Rod Color	3-Car Trains
green	
purple	
yellow	

NOTE: Your child is learning to list combinations and write addition sentences using Cuisenaire® Rods.

Write an addition sentence for each picture.

8.

R
W	W

$$W + W = R$$

9.

G	
R	W

_____

10.

P	
G	W

_____

11.

Y	
R	G

_____

12.

Y	
W	P

_____
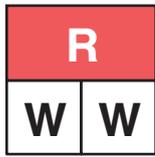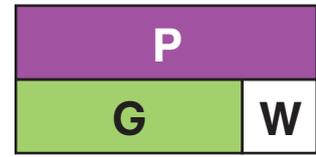
13. What other rod train is as long as a yellow rod?
Write an addition sentence and draw a picture.

_____

Challenge

14. Make a 2-car train that is as long as a yellow rod. Then make a new train using two of each car. What color rod matches this longer train? _____

What addition sentence shows this? _____

Exploring Fact Families

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

What is the fact family for each picture?

1.

D
P	R

R   P
_____   _____   _____

_____   _____   _____

_____   _____   _____

_____   _____   _____

2.

D
Y	W

_____   _____   _____

_____   _____   _____

_____   _____   _____

_____   _____   _____

3.

K
Y	R

_____   _____   _____

_____   _____   _____

_____   _____   _____

_____   _____   _____
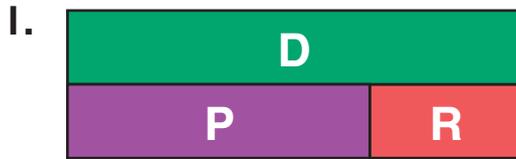
NOTE: Your child is learning to write a fact family of addition and subtraction sentences for Cuisenaire® Rod trains.

4. What is the fact family for these rod trains?

R	
W	W

_____ _____ _____

_____ _____ _____

_____ _____ _____

_____ _____ _____

---

5. Write the other sentences for this fact family.
Tell how you completed the sentences.

R   G   Y

_____ _____ _____

_____ _____ _____   _____ _____ _____

_____

_____

_____

_____

Challenge

6. Use ☾ + ☺ = △ to complete each sentence.

☺ + ☾ = _____

△ − ☺ = _____

△ − ☾ = _____

Connecting Addition and Subtraction

What is missing in each fact family?
Draw the symbols. Write the numbers.

1.
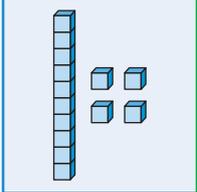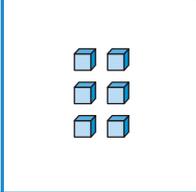
14 _____ _____ 6

_____ _____ _____

_____ _____ _____

2.
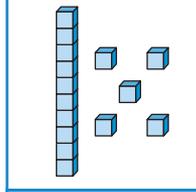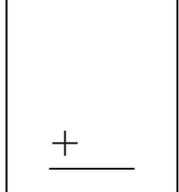
15
20

_____ _____

_____ _____

3.

_____ _____ _____

_____ _____ _____

_____ _____ _____
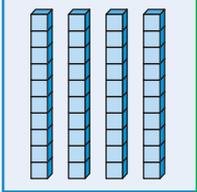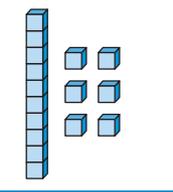
4.

_____ _____

_____ _____
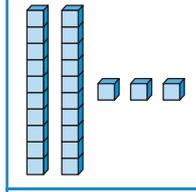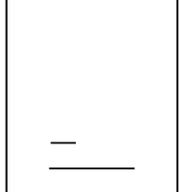
NOTE: Your child is learning to write fact families that relate addition and subtraction problems.

What is missing in each fact family?
Draw the symbols. Write the numbers.

5.

_____ _____ _____

_____ _____ _____

_____ _____ _____

_____ _____ _____

6.
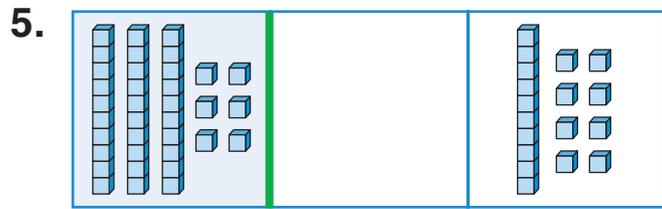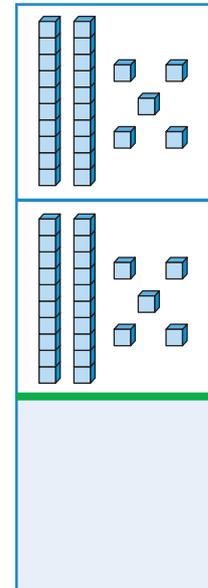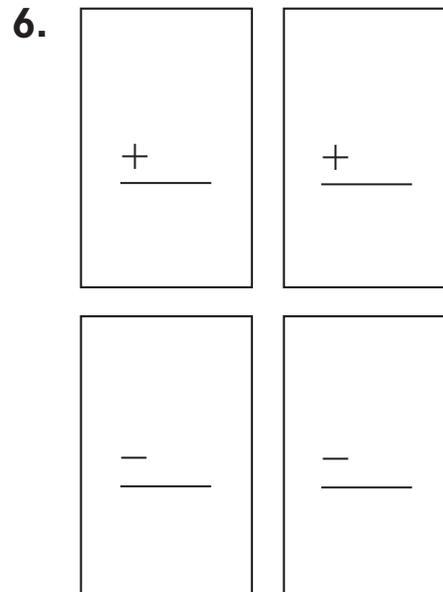
7. Pick a number sentence from Problem 6.
Write a story to match it.

_____

_____

_____

_____

Challenge

8. Write the fact family.

_____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____

Chapter 8
Lesson 4

Adding and Subtracting Using 5 and 10

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

How much is each collection worth?

1.

_____¢

2.

_____¢

What is missing? Complete the expressions for each number.

3.   8

5   3

4   4

10   2

4.   14

5   _____

7   _____

10   _____

5.   15

5   _____

5   5   _____

20   _____

6.   21

20   _____

1   10   _____

10   _____

7.   25

5   _____

10   10   _____

15   _____

8.   36

26   _____

30   _____

16   _____

NOTE: Your child is learning a strategy to help add and subtract by breaking numbers apart into fives and tens.

Add or subtract.

9. 8 21 _____	10. 14 9 _____	11. 15 25 _____
12. 14 6 _____	13. 21 8 _____	14. 36 25 _____

15.   27¢
            5¢
          ——
          ¢
	16. 40¢
	            15¢
	          ——
	          ¢
		17. 25¢
		            9¢
		          ——
		          ¢

18. Use words, numbers, or pictures to explain how you solved Problem 17.

Problem Solving

19. Barbara has 35¢. She buys a whistle for 10¢ and a sticker for 8¢. How much money does she have left? Explain.

_____¢

_____

_____

_____

_____

Chapter 8
Lesson 5

Adding and Subtracting Numbers Near 10

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

What is missing in each table? Use the rule.

1.

a	11	12	21	22	30		32	43	
a 8	19	20	29			39			52

2.

n	29	28	50	51		61		91	
n 9	20	19			43		62		83

3.

10	20		40	90		92	73		*c*
2		22			83			66	*c* 8

4.

28	27	78	77	58	57	37		87	*m*
37		87					26		*m* 9

NOTE: Your child is learning to solve addition and subtraction problems by using 10 and then adjusting the results.

What is missing? Complete each sentence.

5. 37   8

    37   10   `47`

    `47`   2   `45`

9. 42   8   ☐

    42   10

    ☐   2   _____

> Find convenient numbers to help you add and subtract.

6. 28   9   _____

10. 33   9   _____

7. 12   49   _____

11. 51   12   _____

8. 64   11   _____

12. 25   11   _____

13. How would you solve 54   9? Use words, numbers, or pictures to explain.

Challenge

14. Complete the table in two different ways. Write the rules.

a	6	15	23	47	58
	12				

a	6	15	23	47	58
	12				

Place Value and Cross Number Puzzles

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

What is missing? Write the numbers or the symbols.

1.

2.

10		17
20	5	25

3.

4.

	4	
10		16
20		

5.

20		21
		45
	3	13
70	9	

NOTE: Your child is learning to add and subtract numbers using Cross Number Puzzles. Ask your child to explain how to solve Problem 5.

What is missing? Write the numbers.

6.

	0	30
0		9
	8	18
40		

8.

10	5	
	4	
20		28
80		

7.

	7	
0	6	
40		42
80	15	

9.

31		1
	10	8
29		
		18

Challenge

10. Fill in the Cross Number Puzzle to help solve this problem.

```
  86
  47
____
```


Breaking Numbers Apart

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

Break the numbers in different ways so they are easier to add. Write the missing numbers.

5 + 3, 1 + 7, and 10 − 2 are all different ways to show 8.

1.

$$\begin{array}{r} 8 \\ + 7 \\ \hline \end{array}$$ ⟹ $$\begin{array}{r} 5 + 3 \\ + 5 + 2 \\ \hline + 5 \end{array}$$ ⟹ $$\begin{array}{r} 1 + 7 \\ + 4 + 3 \\ \hline + \end{array}$$ ⟹ $$\begin{array}{r} 10 - 2 \\ + 10 - 3 \\ \hline - \end{array}$$

2.

$$\begin{array}{r} 15 \\ + 18 \\ \hline \end{array}$$ ⟹ $$\begin{array}{r} 10 + 5 \\ + 10 + 8 \\ \hline + \end{array}$$ ⟹ $$\begin{array}{r} + 10 \\ + 5 + \\ \hline + \end{array}$$ ⟹ $$\begin{array}{r} 20 - \\ + \quad - 2 \\ \hline - 7 \end{array}$$

3.

$$\begin{array}{r} 9 \\ + 34 \\ \hline \end{array}$$ ⟹ $$\begin{array}{r} 4 + \\ + 9 + \\ \hline 13 + \end{array}$$ ⟹ $$\begin{array}{r} 9 + \\ + 31 + \\ \hline + \end{array}$$ ⟹ $$\begin{array}{r} 10 - \\ + \quad - 6 \\ \hline - \end{array}$$

4.

$$\begin{array}{r} 26 \\ + 26 \\ \hline \end{array}$$ ⟹ $$\begin{array}{r} + 1 \\ + \quad + 1 \\ \hline + 2 \end{array}$$ ⟹ $$\begin{array}{r} 9 + \\ + 31 + \\ \hline + \end{array}$$ ⟹ $$\begin{array}{r} 10 - \\ + \quad - 6 \\ \hline - \end{array}$$

NOTE: Your child is learning strategies that make it easier to solve addition and subtraction problems.

Break the numbers apart in different ways. Then complete the puzzle. Circle the way that matches the puzzle.

5.

14
+ 28

$\Rightarrow$ =

+ 4
+ 20 +
+

$\Rightarrow$ =

7 +
+ 14 +
+

$\Rightarrow$ =

20 −
+ − 2
− 2

10		14
	8	28
	12	

6.

76
+ 28

$\Rightarrow$ =

75 +
+ 25 +
+

$\Rightarrow$ =

+ 6
+ 20 +
+

$\Rightarrow$ =

80 −
+ − 2
−

70		
	8	
90		

7.

37
+ 19

$\Rightarrow$ =

20 +
+ 16 +
+

$\Rightarrow$ =

40 −
+ − 1
−

$\Rightarrow$ =

+ 7
+ 10 +
+

30	7	
10		19

Challenge

8. Break the numbers apart in different ways.

149
+ 46

$\Rightarrow$ =

+	+ 100
+ 6 +	+ 0
+	+

$\Rightarrow$ =

150 −
+ − 4
−

Chapter 8
Lesson 8

Using Cross Number Puzzles to Subtract

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

What is missing?

1.

40		52
20	4	24

2.

71	60	11
46		6

3.

76		
	80	13

4.

	9	59
70		83

Show how to solve each problem.

5.
$$\begin{array}{r} 82 \\ \underline{-\;69} \end{array}$$

6.
$$\begin{array}{r} 38 \\ \underline{-\;47} \end{array}$$

NOTE: Your child is learning to solve addition and subtraction problems using different strategies.

What is missing?

7.   26
      46
      _____

8.   62
      30
      _____

9. 34   19   _____

10. 51   25   _____

11. 98   35   _____

12. 196   97   _____

13. How would you solve 53   29? Use words, numbers, or pictures to explain.

Problem Solving

14. Lenny read 49 pages of his book on Monday. He read 23 pages on Tuesday. How many pages did he read on both days?

_____ pages

15. Pia's book is 302 pages long. She has read 150 pages. How many more pages does Pia have left to read?

_____ pages

Comparing Mathematical Expressions

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

Make each sentence true. Write , , or .

1. 64   36 $\bigcirc<$ 64   37

2. 54   5 $\bigcirc$ 54   10

3. 84   37 $\bigcirc$ 37   84

4. 87   48 $\bigcirc$ 87   50

5. 72   43 $\bigcirc$ 42   72

6. 39   12 $\bigcirc$ 13   39

7. 36   26 $\bigcirc$ 86   76

8. 57   37 $\bigcirc$ 46   36

9. 24   36 $\bigcirc$ 25   35

10. 64   39 $\bigcirc$ 65   39

11. 64   39 $\bigcirc$ 65   40

12. 39   13 $\bigcirc$ 12   40

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NOTE: Your child is learning to compare addition and subtraction expressions using   ,   , and   .

What is missing?

13. 28   32   _32_   28

17. 30   28   20   _____

14. 43   _____   43   19

18. 47   18   57   _____

15. 15   17   16   _____

19. 24   12   _____   13

16. _____   63   12   64

20. 62   36   _____   60

✏️ **21.** How did you solve Problem 20? Use words, numbers, or pictures to explain.

Challenge

Write   ,   , or   .

22. n   9   ◯   n   10

23. n   36   ◯   n   37

Chapter 8
Lesson 10

Creating and Solving Story Problems

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

> Jamie sold 63 red balloons, 48 blue balloons, and 24 green balloons.

1. Circle a question that can be answered from the story.

- How many balloons did Jamie sell?

- How much money did Jamie make?

- How many more red balloons than blue balloons did Jamie sell?

- How much string did Jamie use?

2. Write a number sentence to match the question you circled.

3. Show how you would solve the problem.

NOTE: Your child is learning to work with addition and subtraction story problems. Ask him or her to make up a story problem for you to solve.

Which number sentence matches each story?

4.

Ms. Lee buys 73 notebooks. Mr. Hall buys the same number of notebooks.

| 73 | 27 | _____ |

5.

Andrew collected 73 shells. He used 27 of the shells to make a frame. How many shells are not in the frame?

| 73 | _____ |

6.

Tamika had 73 crayons in her box. She found 27 more. Now how many crayons does she have?

| 73 | 27 | _____ |

Challenge

7. Solve Problem 6. Show how you solved it.

Strategies for Multiple-Choice Questions

NCTM Standards 1, 6, 8, 9, 10

Fill in the bubble for each correct answer.

It helps to cross out answers that do not make sense for a problem.

Color in the correct answer.

1.   13
       17
   ─────

Ⓐ 4   Ⓒ 30
Ⓑ 20   Ⓓ 45

---

2.   3
       7
   ─────

Ⓐ 4
Ⓑ 8
Ⓒ 9
Ⓓ 10

3. 30   10   ─────

Ⓐ 20   Ⓒ 40
Ⓑ 31   Ⓓ 300

---

4.   43
       28
   ─────

Ⓐ 71
Ⓑ 61
Ⓒ 25
Ⓓ 15

5. 25   17   ─────

Ⓐ 8   Ⓒ 42
Ⓑ 32   Ⓓ 312

NOTE: Your child is learning to answer multiple-choice questions. Ask him or her how to eliminate answer choices to help solve the problems.

Fill in the bubble for each correct answer.

6.
$$\begin{array}{r} 49 \\ \underline{97} \end{array}$$

- (A) 1,316
- (B) 154
- (C) 146
- (D) 50

7.
$$\begin{array}{r} 56 \\ \underline{19} \end{array}$$

- (A) 37
- (B) 40
- (C) 43
- (D) 75

8. 175   20   _____

- (A) 195
- (C) 165
- (B) 177
- (D) 155

9. 315   9   _____

- (A) 325
- (C) 306
- (B) 324
- (D) 225

BIG TOY SALE!
trains 12¢   cars 35¢   boats 25¢

10. Emma bought a toy car. She paid the clerk 50¢. How much change did she get?

- (A) 15¢
- (C) 38¢
- (B) 25¢
- (D) 40¢

11. Dane bought a train. Ciara bought a boat. How much more did Ciara spend than Dane?

- (A) 9¢
- (C) 23¢
- (B) 13¢
- (D) 37¢

Challenge

12. Brad bought 3 toy cars and 1 train. Claudia bought 6 boats. How much more did Claudia spend than Brad?

- (A) 47¢
- (C) 43¢
- (B) 45¢
- (D) 33¢

Name _____   Date/Time _____

Problem Solving Strategy
Solve a Simpler Problem ✏️

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

Understand
Plan
Solve
Check
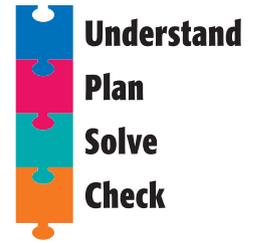
1. Martha had 57 stamps in her collection. She bought a package of 15 stamps. Then how many stamps did she have in the collection?

How did you find the answer?

_____ stamps

_____

_____

2. There were 184 magazines in the store. Another 55 magazines were delivered. Then the store sold 50 magazines. How many magazines were in the store then?

How did you find the answer?

_____ magazines

_____

_____

3. Howie spent 16 minutes on his math homework and 25 minutes on his reading homework. How much time did Howie spend doing his homework?

How did you find the answer?

_____ minutes

_____

_____

NOTE: Your child is exploring different ways to solve problems. Sometimes solving a simpler problem is an efficient way to find the answer.

Problem Solving Test Prep

1. Kyle rides his bike 1 mile every 10 minutes. He starts riding at 9:00. How far will he ride by 9:30?

(A) 1 mile

(B) 2 miles

(C) 3 miles

(D) 4 miles

2. Half of a number is between 20 and 25. What number could it be?

(A) 11

(B) 24

(C) 46

(D) 55

✏️ Show What You Know

3. Tina makes a bead necklace. She strings on 1 white bead, 2 blue beads, 1 white bead, 2 blue beads. If she continues this pattern, what color will the eighth bead be?

_____

Explain how you found the answer.

_____

_____

_____

_____

4. The Eagle basketball team scored 16 points in the second half of the game. They had 38 points at the end of the game. How many points did the team score in the first half?

_____ points

Explain how you know.

_____

_____

_____

 on the right margin

Chapter 8

Review/Assessment

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

What is missing in each fact family? Draw the symbols or write the numbers. Lessons 1–3

1.

G	
R	W

_____ _____ _____

_____ _____ _____

_____ _____ _____

_____ _____ _____

2.

_____ _____ _____

_____ _____ _____

_____ _____ _____
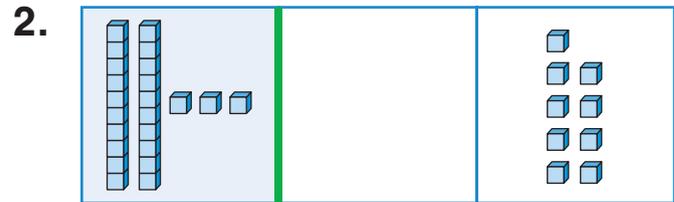
What is missing? Complete the expressions for each number. Lesson 4

3. 12

10 _____

6 _____

5 _____

4. 34

30 _____

24 _____

14 _____

5. What is missing in the table? Use the rule. Lesson 5

m	13	14	50		71	72	38		49
m + 11	24		61	60				50	

What is missing? Complete each puzzle. Lessons 6–8

6.

	2	
40		45
70		

7.

60	11	71
	3	53

8. Break the numbers apart. Circle the box that
matches the puzzle. Lesson 7

$$\begin{array}{r} 24 \\ + 19 \\ \hline \end{array}$$
⟹ =
$$\begin{array}{r} +\ 4 \\ + 10 + \\ \hline \\ + \end{array}$$
⟹ =
$$\begin{array}{r} +\ 1 \\ + 10 + \\ \hline \\ + \end{array}$$
⟹ =
$$\begin{array}{r} 30 - \\ +\quad - 1 \\ \hline - \end{array}$$

20		
	9	19
	13	

Make each sentence true. Write , , **or** . Lesson 9

9. 21 38 ◯ 20 38

10. 45 13 ◯ 45 23

Fill in the bubble for each correct answer. Lesson 11

11.
$$\begin{array}{r} 39 \\ 25 \\ \hline \end{array}$$
Ⓐ 514
Ⓑ 64
Ⓒ 54
Ⓓ 14

12.
$$\begin{array}{r} 87 \\ 38 \\ \hline \end{array}$$
Ⓐ 125
Ⓑ 59
Ⓒ 49
Ⓓ 45

Problem Solving Lesson 12

13. Ms. Chen sold 23 apple muffins at the
bake sale. She sold 41 corn muffins.
How many corn and apple muffins
did she sell?

_____ muffins

184 one hundred eighty-four **CLXXXIV** 92 92