

# Multiplying and Dividing

## Recording Different Ways

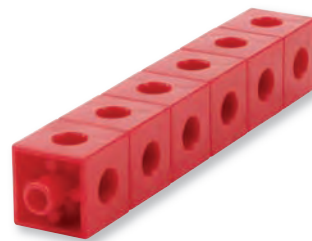
### You need

- connecting cubes

### STEP 1 Making a Train

As a group, decide how many cubes to put in a train. Then each person makes a train of that size.

How many cubes are in your train? \_\_\_\_\_ cubes



### STEP 2 Recording Trains and Cubes

How many trains did your group make? \_\_\_\_\_ trains

How can you find the number of cubes in all of the trains for your group?

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Write a number sentence to show what you did.

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### STEP 3 Recording a Different Way

Can you think of other number sentences to describe the trains? Write as many sentences as you can.

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# School-Home Connection

## Dear Family,

Today we started Chapter 16 of *Think Math!* In this chapter, I will learn multiplication and division facts. 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 as I learn to multiply and divide.

Love,

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## Family Fun

### Fact Family Fandango

Work with your child to play this game. Your child will play a similar game in Lesson 3.

- You and your child each say a number from 0 to 10. Multiply the two numbers and write the sentence on a sheet of paper. For example:

$$6 \times 8 = 48$$

- Have your child write all the number sentences that are part of the fact family that includes the sentence you just wrote.

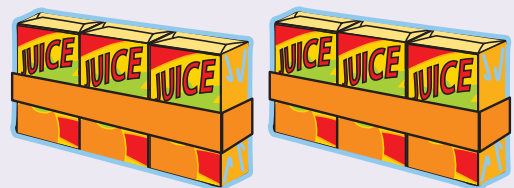
$$8 \times 6 = 48, 48 \div 6 = 8, 48 \div 8 = 6$$

- For every sentence your child records correctly, he or she gets a point. For every sentence he or she misses or records incorrectly, you get a point.
- Play several rounds. The player with more points at the end of the game wins.

### Supermarket Math

Try this activity on your next trip to the store.

- Look for per-package counts on various products. For example the number of packets of oatmeal in a box, or the number of juice boxes in a pack. Look for packages that contain up to 10 items.
- Pose simple multiplication and division problems for your child to solve. If you find a 3-pack of juice boxes, then you might ask, "How many juice boxes are in 2 packages? What about 3 packages?"
- Invite your child to share how he or she found the answer.



# Creating Multiplication Tables

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

- I. Fill in the table. Use your memory, draw a picture, or look back at work you have done before.

Draw pictures of intersections, sets, or arrays to help you.



	0	1	2	3	4	5	6	7	8	9	10
0	0		0			0					
1											
2											
3			6		12		18				
4											
5	0										
6											
7											
8											
9											
10											



**NOTE:** Your child is learning to complete a multiplication table using different strategies.

Part of a row from the multiplication table is shown.  
What number is being multiplied in the row?

2.


$\times$ <u>5</u>	15	20	25	30	35	40
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3.

$\times$ _____	28	35	42	49	56	63
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4.

$\times$ _____	15	18	21	24	27	30
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-  5. Jan knows that  $2 \times 9 = 18$ .  
How can she use this fact to solve  $3 \times 9$ ?

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-  6. How can you use  $2 \times 9$  to solve  $9 \times 2$ ?

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## Problem Solving

7. Why is the first row of the multiplication table on page 341 all zeros? Explain.

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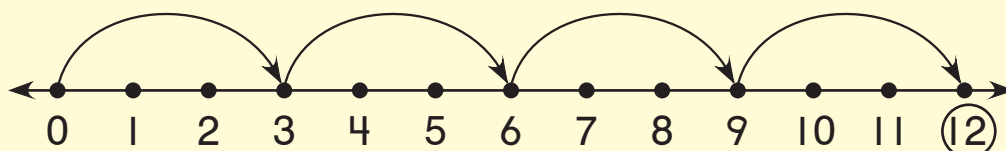
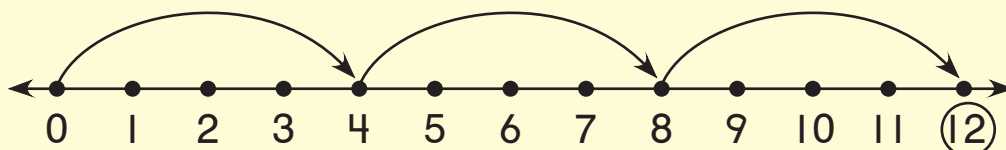
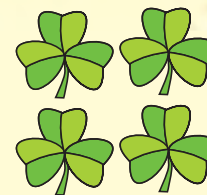
# Multiplication and Division

NCTM Standards 1, 2, 6, 9, 10



4 4 4 12

Each picture is  
about the numbers  
3, 4, and 12.



$$\begin{array}{r} 3 \\ 3 \\ 3 \\ + 3 \\ \hline 12 \end{array}$$

What is missing? Complete each fact.

1.

$$3 \times \overset{4}{\quad} = 12$$

2.

$$4 \times \quad = 12$$

3.

$$\begin{array}{r} \boxed{4} \\ \boxed{\phantom{00}} \overline{) 12} \end{array}$$

4.

$$\begin{array}{r} \boxed{3} \\ \boxed{\phantom{00}} \overline{) 12} \end{array}$$

5.

$$\begin{array}{r} 3 \\ \times 4 \\ \hline \boxed{\phantom{00}} \end{array}$$

6.

$$\begin{array}{r} 4 \\ \times 3 \\ \hline \boxed{\phantom{00}} \end{array}$$

7.

$$\quad \div 4 = 3$$

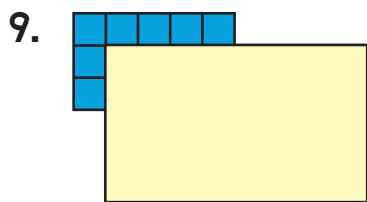
8.

$$12 \div 3 = \quad$$

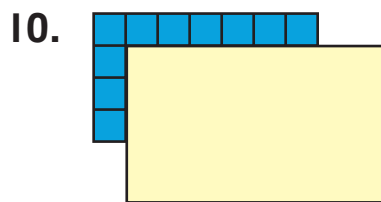


**NOTE:** Your child is learning to complete multiplication and division facts.

How many squares are there in all?  
Write the missing numbers.



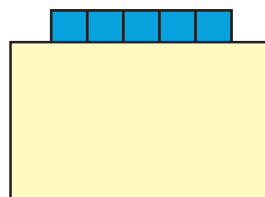
$$\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$



$$\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

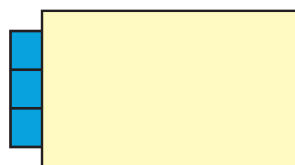
11. There are 25 squares in all.  
How many rows are there?

$$25 \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$



12. There are 24 squares in all.  
How many columns are there?

$$24 \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$



## Challenge

Complete each fact family.

13.  $4 \times 5 = 20$

$$\square \div \square = \square$$

$$\begin{array}{r} \square \\ \square \overline{) \square} \end{array}$$

$$\begin{array}{r} \square \\ \square \\ \times \square \\ \hline \square \end{array}$$

14.  $3 \times 6 = 18$

$$\square \div \square = \square$$

$$\begin{array}{r} \square \\ \square \overline{) \square} \end{array}$$

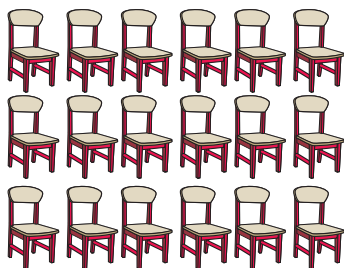
$$\begin{array}{r} \square \\ \square \\ \times \square \\ \hline \square \end{array}$$

# Writing Multiplication and Division Fact Families

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

What is missing? Complete each fact family.

1.



$$\boxed{3} \times \boxed{6} = \boxed{\phantom{00}}$$

$$\boxed{\phantom{00}} \div \boxed{6} = \boxed{\phantom{00}}$$

$$\boxed{\phantom{00}} \times \boxed{\phantom{00}} = \boxed{\phantom{00}}$$

$$\boxed{\phantom{00}} \div \boxed{3} = \boxed{\phantom{00}}$$

2.

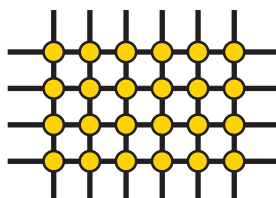


$$\begin{array}{r} \boxed{\phantom{00}} \\ \times \boxed{\phantom{00}} \\ \hline \boxed{\phantom{00}} \end{array}$$

$$\begin{array}{r} \boxed{\phantom{00}} \\ \times \boxed{\phantom{00}} \\ \hline \boxed{\phantom{00}} \end{array}$$

$$\begin{array}{r} \boxed{\phantom{00}} \\ \boxed{\phantom{00}} \overline{) \boxed{\phantom{00}}} \\ \boxed{\phantom{00}} \overline{) \boxed{\phantom{00}}} \\ \boxed{\phantom{00}} \overline{) \boxed{\phantom{00}}} \end{array}$$

3.



$$\boxed{4} \times \boxed{\phantom{00}} = \boxed{\phantom{00}}$$

$$\boxed{\phantom{00}} \div \boxed{\phantom{00}} = \boxed{\phantom{00}}$$

$$\boxed{6} \times \boxed{\phantom{00}} = \boxed{\phantom{00}}$$

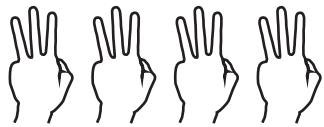
$$\boxed{\phantom{00}} \div \boxed{\phantom{00}} = \boxed{\phantom{00}}$$



**NOTE:** Your child is learning to complete multiplication and division fact families.

What is missing? Complete each fact family.

4.



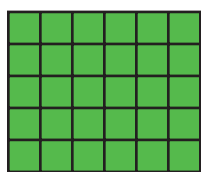
$$3 \times \square = \square$$

$$12 \div \square = \square$$

$$\square \times \square = \square$$

$$\square \div \square = \square$$

5.



$$\begin{array}{r} \square \\ \times \square \\ \hline \square \end{array}$$

$$\begin{array}{r} 5 \\ \times \square \\ \hline \square \end{array}$$

$$\begin{array}{r} \square \\ \square \overline{) 30} \\ \square \\ \hline \square \end{array}$$

6.



$$3 \times \square = \square$$

$$\square \div \square = \square$$

$$\square \times \square = \square$$

$$\square \div \square = \square$$

## Problem Solving

7. Write a division story. Then write a number sentence to match it.

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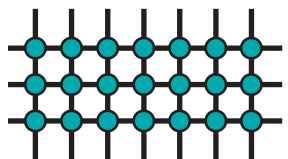


# Connecting Pictures, Number Sentences, and Stories

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

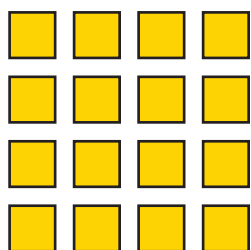
Draw a line from each picture to the matching number sentence. Complete the sentence.

1.



$$28 \div 7 = \underline{\hspace{2cm}}$$

2.



$$7 \times 3 = \underline{\hspace{2cm}}$$

3.



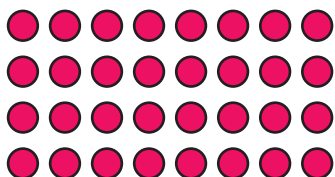
$$32 \div 4 = \underline{\hspace{2cm}}$$

4.

Sun	Mon	Tue	Wed	Thur	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

$$16 \div 4 = \underline{\hspace{2cm}}$$

5.



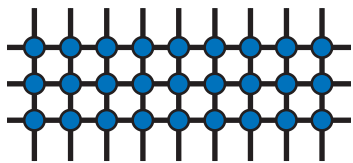
$$4 \times 10 = \underline{\hspace{2cm}}$$



**NOTE:** Your child is learning to write multiplication and division sentences for pictures.

Complete the fact families to match the pictures and stories.

6.



$$\boxed{3} \times \boxed{\phantom{00}} = \boxed{\phantom{00}}$$

$$\boxed{\phantom{00}} \div \boxed{\phantom{00}} = \boxed{\phantom{00}}$$

$$\boxed{9} \times \boxed{\phantom{00}} = \boxed{\phantom{00}}$$

$$\boxed{\phantom{00}} \div \boxed{\phantom{00}} = \boxed{\phantom{00}}$$

7. There are 24 marbles. They are shared equally among 3 children.

$$\boxed{\phantom{00}} \div \boxed{\phantom{00}} = \boxed{\phantom{00}}$$

$$\begin{array}{r} \boxed{\phantom{00}} \\ \boxed{\phantom{00}} \\ \times \boxed{\phantom{00}} \\ \hline \boxed{\phantom{00}} \end{array} \quad \begin{array}{r} \boxed{\phantom{00}} \\ \boxed{\phantom{00}} \\ \times \boxed{\phantom{00}} \\ \hline \boxed{\phantom{00}} \end{array}$$

$$\boxed{\phantom{00}} \div \boxed{\phantom{00}} = \boxed{\phantom{00}}$$

8. There are 36 baseballs. They are put into packages of 6 baseballs each.

$$\boxed{\phantom{00}} \times \boxed{\phantom{00}} = \boxed{\phantom{00}}$$

$$\begin{array}{r} \boxed{\phantom{00}} \\ \boxed{\phantom{00}} \\ \boxed{\phantom{00}} \\ \times \boxed{\phantom{00}} \\ \hline \boxed{\phantom{00}} \end{array}$$

## Challenge

Find each product.

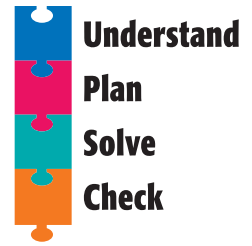
9.  $2 \times 3 \times 4 = \underline{\hspace{2cm}}$

10.  $6 \times 1 \times 5 = \underline{\hspace{2cm}}$

# Problem Solving Strategy

## Act It Out

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



1. Three children equally share \$1.50 in quarters.  
How much money does each child get?

\_\_\_\_\_ ¢

2. A sheet of stamps has 6 rows with 5 stamps in  
each row. How many stamps are there in all?

\_\_\_\_\_ stamps

3. 15 chairs are arranged in equal rows.  
How many chairs might be in each row?

\_\_\_\_\_ chairs

4. Some children equally share 48 pretzels. Each  
child gets 8 pretzels. How many children share  
the pretzels?

\_\_\_\_\_ children



**NOTE:** Your child is exploring different ways to solve problems. Sometimes acting it out is an efficient way to solve a problem.

# Problem Solving Test Prep

1. Cam has 3 coins in his pocket. He has only dimes and pennies. Which total amount is NOT possible for him to have?

(A) 3¢  
(B) 5¢  
(C) 12¢  
(D) 30¢

2. There are 7 days in a week. Which number sentence shows how many days there are in 3 weeks?

(A)  $7 - 3 = 4$   
(B)  $7 + 7 = 14$   
(C)  $7 \times 3 = 21$   
(D)  $4 \times 7 = 28$



## Show What You Know

3. There are 49 erasers packed in boxes. The number of boxes is the same as the number of erasers in each box. How many erasers are in each box?

\_\_\_\_\_ erasers

Explain how you found the answer.

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4. Each wagon has 4 wheels. How many wheels are there on 5 wagons?

Wagon	1				
Wheels	4				

Explain how you found the answer.

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## Review/Assessment

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

I. Complete the multiplication table. [Lesson 1](#)

	0	1	2	3	4	5	6	7	8	9	10
3			6			15					
5					20						
7				21							

2. Sue knows that  $8 \times 5 = 40$ . How can she use this fact to solve  $9 \times 5$ ? [Lesson 1](#)

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What is missing? Complete each fact. [Lesson 2](#)

3.

$$7 \times \underline{\hspace{2cm}} = 28$$

4.

$$\underline{\hspace{2cm}} \div 7 = 4$$

5.

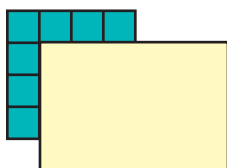
$$\begin{array}{r} 7 \\ 4 \\ \hline \square \end{array}$$

6.

$$\begin{array}{r} \square \overline{) 28} \\ 7 \end{array}$$

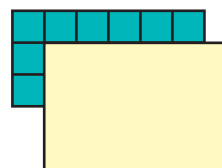
How many squares are there in all? Write the missing numbers. [Lesson 2](#)

7.



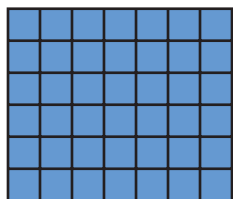
$$\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

8.



$$\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

9. What is missing? Complete the fact family. Lesson 3



$$\boxed{6} \times \boxed{\phantom{00}} = \boxed{\phantom{00}}$$

$$\boxed{42} \div \boxed{\phantom{00}} = \boxed{\phantom{00}}$$

$$\boxed{\phantom{00}} \times \boxed{\phantom{00}} = \boxed{\phantom{00}}$$

$$\boxed{\phantom{00}} \div \boxed{\phantom{00}} = \boxed{\phantom{00}}$$

Complete the fact families to match the stories. Lesson 4

10. There are 14 balloons. They are shared equally among 7 children.

$$\boxed{\phantom{00}} \div \boxed{\phantom{00}} = \boxed{\phantom{00}}$$

$$\boxed{\phantom{00}} \div \boxed{\phantom{00}} = \boxed{\phantom{00}}$$

$$\begin{array}{r} \boxed{\phantom{00}} \\ \boxed{\phantom{00}} \\ \times \boxed{\phantom{00}} \\ \hline \boxed{\phantom{00}} \end{array}$$

$$\begin{array}{r} \boxed{\phantom{00}} \\ \boxed{\phantom{00}} \\ \times \boxed{\phantom{00}} \\ \hline \boxed{\phantom{00}} \end{array}$$

11. There are 81 books. They are put on shelves with 9 books on each shelf.

$$\boxed{\phantom{00}} \times \boxed{\phantom{00}} = \boxed{\phantom{00}}$$

$$\begin{array}{r} \boxed{\phantom{00}} \\ \boxed{\phantom{00}} \overline{) \boxed{\phantom{00}}} \end{array}$$

## Problem Solving Lesson 5

12. Five children equally share \$1.00 in dimes.  
How much money does each child get?

\_\_\_\_\_ ¢