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# To Teachers

*Multiplication and Division* presents a unique approach to introducing multiplication and division facts to young children by integrating games and activity sheets. Each multiplication and division fact is introduced and reinforced. Concept pages sequentially introduce each of the times tables and division tables. These fact lists can be cut out and attached to index cards and used to help students when completing activity sheets, playing games, and practising the facts.

The activity pages to reinforce each concept include puzzles, coloring activities, cut-and-paste projects and games. Each activity was specially designed to reinforce the basic multiplication and division facts. Every chapter is full of activity pages that allow children to study the facts inside and out, upside down, and right-side up until they “own” the facts—they become a part of them.

The important thing to remember is to focus on the celebration of learning. Make each activity fun and a real celebration!

## Special Teaching Tips

Educators have known for years that children learn in different ways. Some learn best from hearing information, others must see it, still others must experience it by touching it. That is quite a challenge when teaching children multiplication and division facts. But these activities will help young learners experience multiplication in a variety of fun-filled ways.

1. Remember, some students will not be able to read the directions found on each page. Begin each activity by reading the directions to the students. Make sure each student understands what he or she must do to complete the page before working independently.
2. Concept pages introduce multiplication and division facts tables from 0-12. Students should be encouraged to cut out the fact tables and attach them to index cards. Use the fact cards to memorize facts, complete activities, and play games. Children can color these fact cards and keep them in specially designed pockets found on pages 48 and 71.
3. The multiplication and division facts introduced are sequential, so you probably won't want to skip around in the book too much. Activities start with times tables from

zero to two and progress to the facts for ten, eleven, and twelve. Multiplying two and three-digit numbers are covered. Division facts for 0-12 and dividing numbers with remainders are also included.

4. Multiplication facts flash cards are on pages: 12-15, 22-25, 31-34, and 40-44. Division flash cards are on pages 72-85. Every student should receive a set of flash cards. Encourage children to use the cards to play games and review the facts with each other. A gameboard designed to be used with the multiplication flash cards is on pages 16-17. Reproduce the flash cards on heavy paper. Help students put the answers on the back of each card for self-checking.
5. These creative approaches to learning multiplication and division facts allow students to experience multiplication and division in a multisensory way. They hear the number facts in the songs they sing. They touch the number combinations as they create learning aids. They say the facts when playing specially designed flash card games. Children are sure to learn multiplication facts quicker when they are having fun. Soon everyone in your class will know all the maths facts because learning the facts has never been so exciting.

# What Is Multiplication?

Hi! My name is Max. I'm going to help you learn how to multiply. You will need an egg carton and some cereal. We're going to use these to practise counting in groups.

Let's begin by putting 2 pieces of cereal in each section of the egg carton. Now count the cereal in 2 sections. How many did you count?

In addition this is written like this:

$$2 + 2 = 4.$$

In multiplication it is written like this:

$$2 \times 2 = 4$$

Count the cereal in 5 sections. How many pieces did you count?

In addition this is written like this:

$$2 + 2 + 2 + 2 + 2 = 10.$$

In multiplication it is written like this:

$$5 \times 2 = 10$$

Count the cereal in all 12 sections. How many pieces did you count?

In addition this is written like this:

$$2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 = 24$$

In multiplication it is written like this:

$$12 \times 2 = 24$$

When you add by groups, it is the same as multiplying!

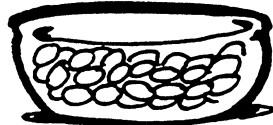
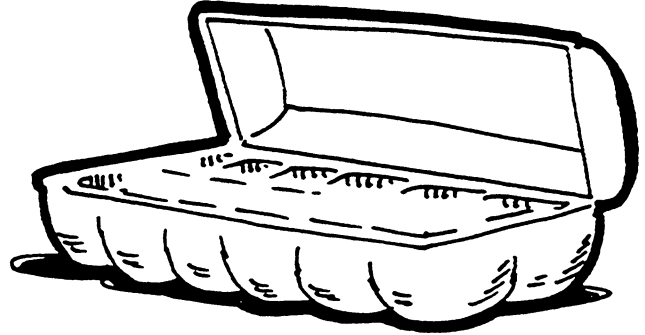


Name \_\_\_\_\_

# Practice Makes Perfect

**Material:** Egg carton  
50 pieces of cereal

Remember, multiplying is adding by groups. Counting in groups is faster than counting things one at a time. The answer to an addition problem is the total. The answer to a multiplication problem is the product.



Use an egg carton and cereal to complete these equations.

1. Make 3 groups of 4 by putting 4 pieces of cereal in each of 3 sections. It should look like this:

Add 3 groups of 4.

$$4 + 4 + 4 = \underline{\quad}$$

Then multiply.

$$3 \times 4 = \underline{\quad}$$

2. Make 5 groups with 2 in each group. Find the total and the product.

$$2 + 2 + 2 + 2 + 2 = \underline{\quad}$$

$$5 \times 2 = \underline{\quad}$$

3. Make 4 groups with 6 in each group. Find the total and the product.

$$6 + 6 + 6 + 6 = \underline{\quad}$$

$$4 \times 6 = \underline{\quad}$$

4. Make 5 groups with 3 in each group. Find the total and the product.

$$3 + 3 + 3 + 3 + 3 = \underline{\quad}$$

$$5 \times 3 = \underline{\quad}$$

# What Is Division?

Now that you know how to multiply, you can also divide. Division is the opposite of multiplication. When you multiply, you add by groups. When you divide, you separate a number into equal groups.

Example:

$$2 \times 6 = 12$$

$$12 \div 6 = 2$$

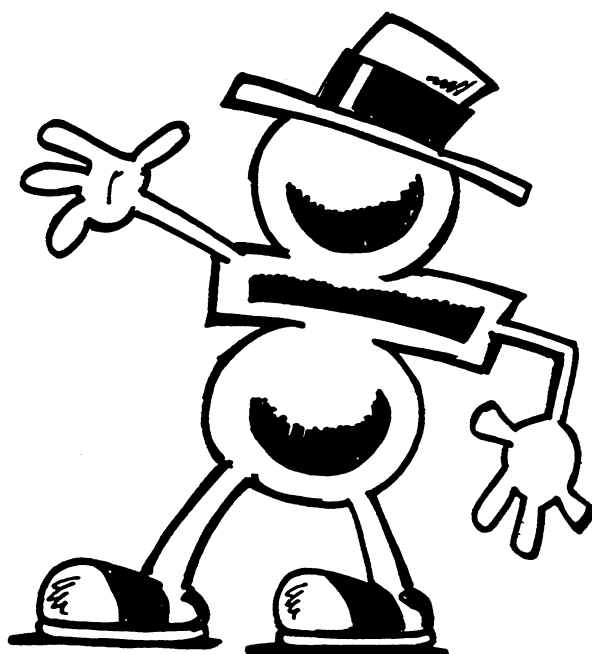
When you divide you find out how many groups or how many in each group. In the division problem

$$12 \div 6 = 2$$

12 tells how many in all.

6 tells how many are in each group.

2 tells how many groups.



Name \_\_\_\_\_

# Learning to Divide

**Materials:** 1 division mat (a large sheet of paper with 12 squares drawn on it)  
20 beans

Now that you know how to multiply, you can begin to work on division. Multiplication and division are opposites. In multiplication you add by groups. When you divide, you separate a number into equal groups.

Use beans and a division mat to solve this problem.  $20 \div 4 = \underline{\quad}$

Count out 20 beans. Put your division mat on your desk. Separate the 20 beans into groups of 4. Put each group of 4 on one section of the division chart. How many groups are there?

Are there other ways to equally divide 20 into groups? Experiment with the beans. Write some equations for dividing 20 into groups.

