

Dimensions Math
Grade 2 Letter Home
Chapter 6 Multiplication and Division

Home Connection

In first grade, your child learned to recognize equal groups and find the total number in the groups by repeated addition. In this chapter, your child will formalize their knowledge of multiplication and division using equal groups and arrays, not on memorizing facts. Your child will use counters or draw pictures as needed throughout the chapter.

Students begin by learning how to use the multiplication symbol to represent the operation of adding quantities in equal groups.

Students will also learn that the total is the same whether there are 4 groups of 3 or 3 groups of 4, that is, $4 \times 3 = 3 \times 4$.

$4 \times 3 = 12$

↑ ↑ ↑
number of groups number in each group total

$3 + 3 + 3 + 3 = 12$

There are **12** hair ties altogether.

We multiply to find the total when we have equal groups. This is called multiplication. \times is read as times.

4 groups of 3 is 12. 4 times 3 equals 12.

Division as sharing and grouping is also introduced. Sharing division begins with the total number of objects and puts them into a number of groups to find out how many there are in each group. For example: **3 children share 12 snickerdoodle cookies equally. How many will each child get?**

I know the total and the number of groups.

Each child gets **4** snickerdoodle cookies.

We divide to find the number in each equal group. This is called division. \div is read as divided by.

$12 \div 3 = 4$

↑ ↑ ↑
total number of groups number in each group

Division as grouping begins with the total number of objects and puts them into equal groups of a given amount to find out how many groups we can make.

Alex divides 12 buttons into groups of 4.
How many groups are there?

$12 \div 4 = 3$

There are **3** groups.

What can we do at home?

The goal of this chapter is for your child to conceptually understand multiplication and division. Lots of practice making equal groups and drawing arrays will really help your child to solidify these concepts. Here are two fun activities to practice these concepts:

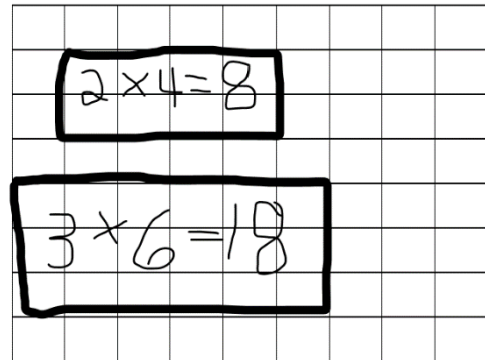
Capture! (Fences)

Materials:

- Graph paper (almost any size will work or you can print graph paper from the TCA website >parents/students > elementary parent resources > printable resources
- <https://www.tcatitans.org/family/elementary-parent-resources>
- Die modified with sides of: 2, 2, 3, 3, 4, 4 and a second die modified with sides of: 2, 3, 4, 5, 6, 7
- 2 different colored pencils or markers

Directions:

- Play with two players.
- Player One rolls the two dice and makes one the number of groups and the other the amount in each group. They enclose that many squares on the graph paper and write the multiplication problem in the rectangle.
- Player Two plays the same way capturing a different group of squares.
- Example game:
- Player one rolls 2 and 4 and encloses 4 rows of 2
- Player two rolls a 3 and 6 and encloses 3 rows of 6
- The winner is the last player to complete a turn before the graph paper is full.



Equal Groups Challenge

Materials:

- 40 counters for each player (cereal, beans, stones, buttons, candy, goldfish etc.)
- Die modified with sides of: 2, 2, 3, 3, 4, 4 and a second die modified with sides of: 2, 3, 4, 5, 6, 7
- Small paper plates or paper cut into 6-inch circles

Directions:

- Play with two to four players.
- The object of the game is to get the greatest number of counters.
- Player One rolls their two dice and chooses one to be the number of groups and the second die to be the number in each group.
- Player One shows the counters in groups on the plates and solves for how many counters there are in all.
- Player Two rolls the two dice and chooses one to be the number of groups and the second die to be the number in each group.
- Player Two then shows the counters in the groups on the plates and solves for how many counters there are in all.
- The player with the greatest number of counters wins the round.

Directions and a video for both activities are available on our TCA Website.
<https://www.tcatitans.org/family/elementary-parent-resources> They are located in
the math resources multiplication and division folder.