

DIVISION

Have you ever shared something fairly with friends? Or have you ever put your toys away into equal groups? When you do this, you are using division! Division is a powerful tool for sharing and grouping equally.

A WHAT IS DIVISION?

Definition Division

Division is the process of splitting a total amount into equal groups. We use the **division sign** (\div) to write a division sentence.

We can show "six divided by three equals two" in many ways:

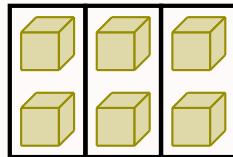
- **With Numbers:**

$$6 \div 3 = 2$$

- **In Groups**

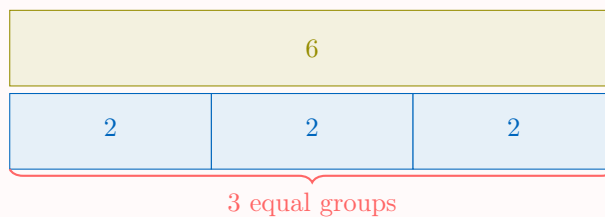
6 shared into 3 equal groups is 2 in each group

- **With Cubes:**



$6 \div 3 = 2$: number of cubes in each group

- **With a Part-Whole Model:**



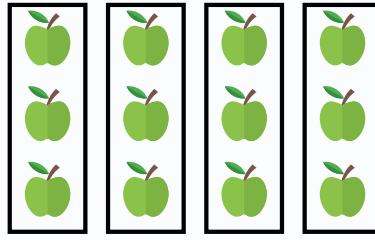
B TWO KINDS OF DIVISION QUESTIONS

Method Question 1: How many in each group?

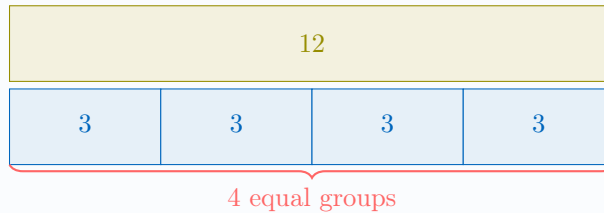
Sometimes you know the **total** and the **number of groups**. Division helps you find the **number of items in each group**.

$$\text{Total} \div \text{Number of groups} = \text{Number in each group}$$

For example, we have 12 apples to share equally among 4 friends.



Each friend gets $12 \div 4 = 3$ apples.

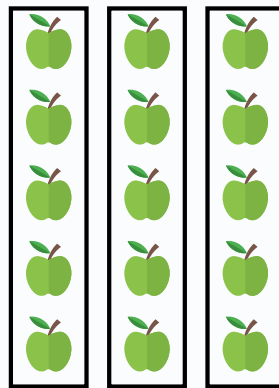


Method Question 2: How many groups can be made?

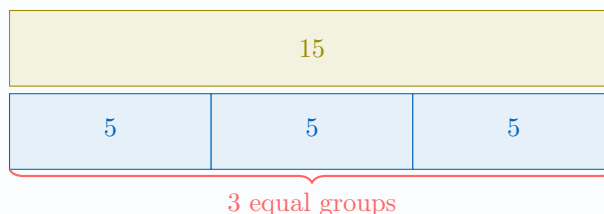
Other times, you know the **total** and the **number of items for each group**. Division helps you find the **number of groups** you can make.

$$\text{Total} \div \text{Number in each group} = \text{Number of groups}$$

For example, we have 15 apples and we put them into boxes of 5.



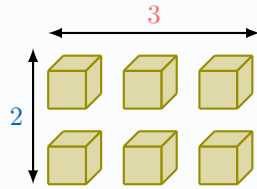
We can make $15 \div 5 = 3$ boxes.



C THE MULTIPLICATION AND DIVISION CONNECTION

Proposition The Multiplication and Division Connection

Multiplication and division are **inverse operations**. This means they are partners that "undo" each other.



The fact family for 3, 2, and 6 is:

$$3 \times 2 = 6$$

$$6 \div 3 = 2$$

$$2 \times 3 = 6$$

$$6 \div 2 = 3$$