DIVISION

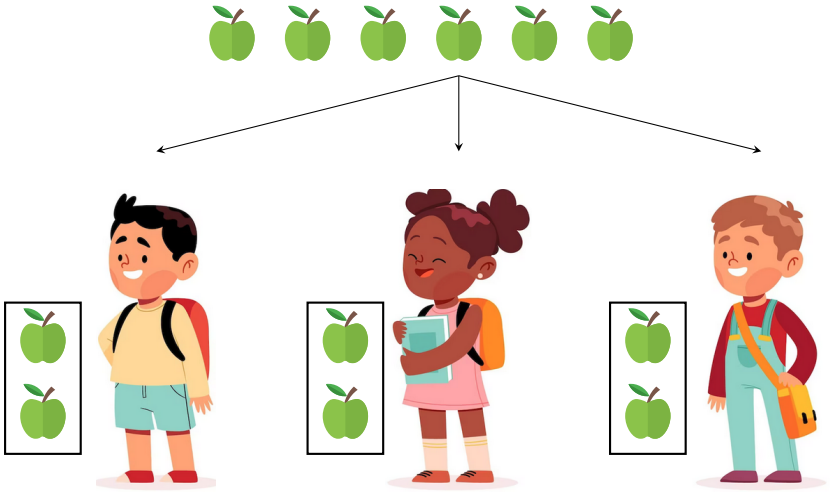
Division is an essential concept in mathematics. It's a way to split a number into equal parts.

A DEFINITIONS

Discover: Kevin, Aisha, and Louis have 6 apples. They want to share these apples equally.

How many apples will each friend get?

Answer: To divide 6 apples among 3 friends:



Each friend receives 2 apples.
When we say 6 apples divided among 3 friends, we can write it as $6 \div 3 = 2$. The symbol $\div$ means "divided by."

Definition **Division**

Division is the process of splitting a number into equal parts or groups. The ÷ symbol indicates division.Division can be represented in several ways:

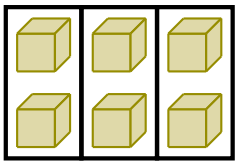
- **Numbers**:

$$6 \div 3 = 2$$

- **Words**:

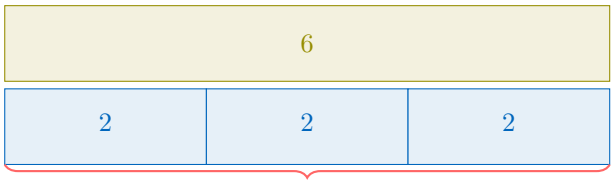
six divided by **three** equals **two**

- **Items**:



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

- **Part-whole model**:



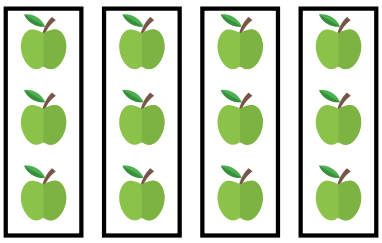
B REPRESENTATIONS OF DIVISION

Method **Number of items in each group**

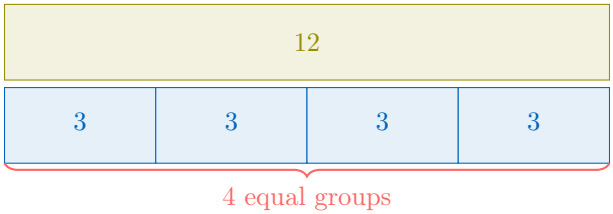
When you know the total and the number of groups, division finds the number of items in each group.

total ÷ number of groups = number of items in each group

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



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

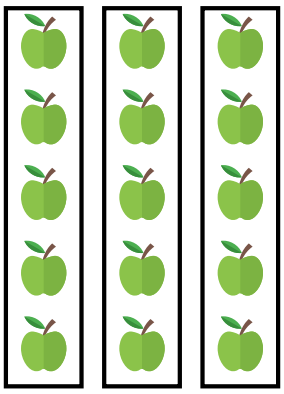


Method **Number of groups**

If you know the total and the number of items in each group, division finds the number of groups.

total ÷ number of items in each group = number of groups

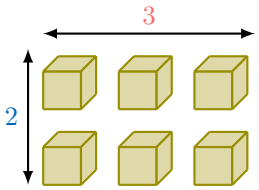
For example, we have 15 apples and pack them into boxes, each holding 5 apples.



Thus, $15 \div 5 = 3$ is the number of boxes.

C INVERSE OPERATIONS: MULTIPLICATION AND DIVISION

Discover:



1. You have 3 columns of 2 cubes each. How many cubes are there in total? (This involves multiplication.)
2. You have 6 cubes to share equally into 3 columns. How many cubes will each column have? (This involves division.)

Answer:

1. Total cubes: $3 \times 2 = 6$
2. Each column has $6 \div 3 = 2$ cubes.

Proposition **Multiplication and Division are Inverse Operations**

Multiplication and division undo each other:

$$3 \times 2 = 6$$
$$6 \div 3 = 2$$
$$6 \div 2 = 3$$