

MATH



CHAPTER 7: DIVISION

DIVISION

➤ INTRODUCTION

Division is the basic arithmetic operation and this the inverse process of multiplications. The symbol for the notation of division is " \div ".

The symbol for the notation of division is also known as obelus. Obelus means a line between two dots. In this chapter we will learn about the division on various type of numbers.

Division is the inverse process of multiplication and repeated subtraction. It determines the one value is how many times greater than another value. It is expressed in the form of $\frac{a}{b}$ where a is the dividend and denoted by capital letter of English alphabet D and b is divisor denoted by small letter d. The number which tells how many times the division has been carried out is called the Quotient and denoted by 'Q'. The number which is left after the division is called the remainder and denoted by 'R'. The symbol for the notation of division is " \div ".

Example:

The division of x by y is represented by:

(a) $x \div y$

(b) $\frac{x}{y}$

(c) $\frac{y}{x}$

(d) Both A and B

(e) None of these

Answer: (d)

Explanation: The division of x by y is represented by either $x \div y$ or $\frac{x}{y}$

➤ DIVISION

LEARNING OBJECTIVES

❖ This lesson will help you to:

- recognize division as equal sharing.
- understand the concept of division as equal grouping.
- prepare division facts by using multiplication tables.

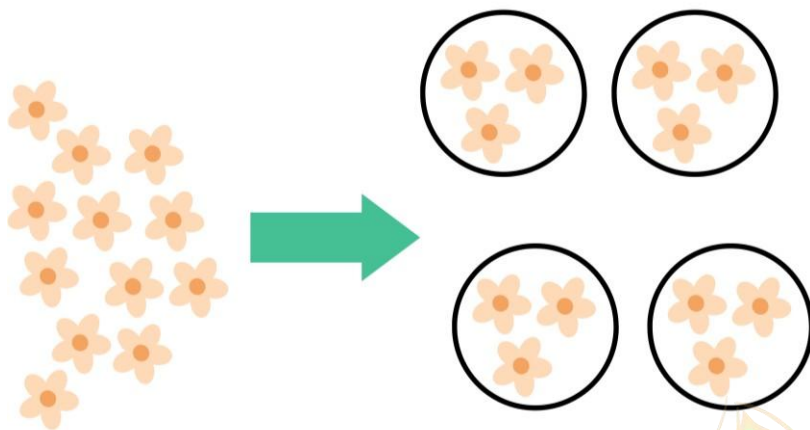
❖ REAL LIFE EXAMPLES

- When you are eating a birthday cake, you have to make equal shares of the cake, so that everyone gets their share. For this you divide the cake in equal sizes.
- If you have Rs. 20 and you want to buy chocolates and each chocolate is of Rs. 5. By using the method of division you can find out the number of chocolates you can buy. Since, $20 \div 5 = 4$ so you can buy 4 chocolates.

❖ DIAGRAMS/PICTURES

Example:

There are 12 daisies. Make groups of 3.



How many groups do you get?

How many 3's are in 12?

The Answer is 4. So, $12 \div 3 = 4$.

The symbol ' \div ' indicates Division.

Example:

Think: If you DIVIDE 10 into groups of two, how many groups are there?

How many groups of two are there in 10? How many two's are there in 10?

Since $2+2+2+2+2=10$, there are FIVE two's in 10; $10 \div 2 = 5$

Division is the equal distribution of a given quantity. The number to be divided is called the dividend. The number which divides is called the divisor. The answer is called the quotient. The number left after the division is called the remainder.

Example:

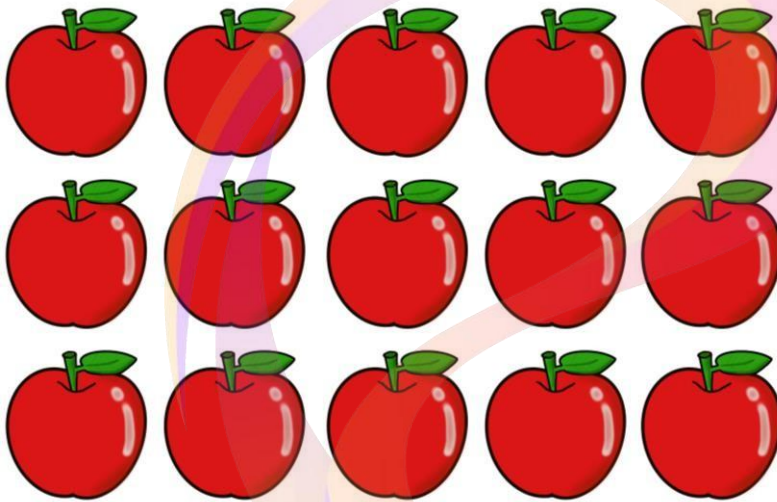
Chunmun bought 15 apples from fruit market. She placed 15 apples equally in 3 baskets.



Divide 15 into equal groups.

There are 5 apples in each group.

Therefore, $15 \div 3 = 5$



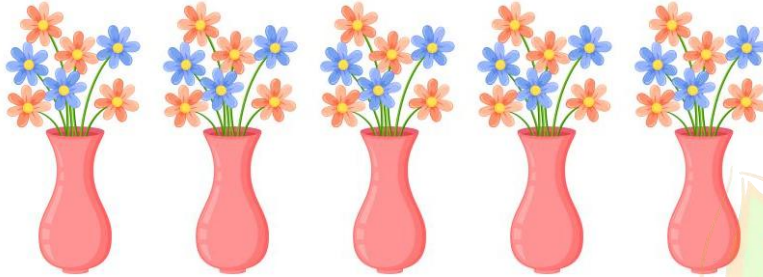
Example:

1. Mrs. Khanna got 35 flowers on her wedding anniversary.





She placed them equally in 5 vases.



There were 7 flowers in each vase.

So, $35 \div 5 = 7$ or

"Thirty five divided by five is seven."

Example:

2. Minki arranged 32 glasses on the dining table for guests.



Minki's mother made 8 groups of the glasses.



There are 4 glasses in each group.

So, $32 \div 8 = 4$ or

"Thirty two divided by eight is four."

❖ AMAZING FACTS

- If you make groups of 1 then the answer is number itself because any number divided by 1 is the number itself. For example, $4 \div 1 = 4$, $12 \div 1 = 12$, etc.
- If the given number ends with 0 or 5 then you can divide the number in groups of 5. For example, $15 = 3$ groups of 5 or $15 \div 5 = 3$, $10 = 2$ groups of 5 or $10 \div 5 = 2$, etc.
- If the given number ends with 0 then you can divide the number in groups of 10. For example $20 = 2$ groups of 10 or $20 \div 10 = 2$, etc.
- When any number is divided by zero, the answer is infinity.

$1857 \div 0 = \text{infinity}$.