

Chapter- 7

Division

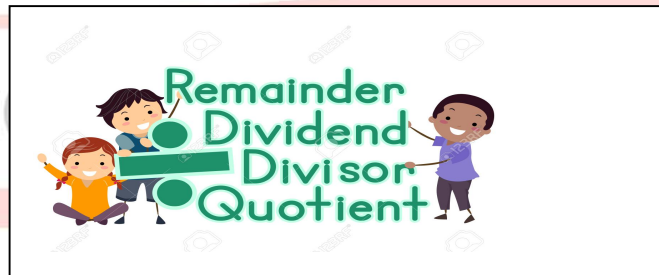
STUDY NOTES

LEARNING OBJECTIVE:

- Division is repeated Subtraction
- Properties of Division
- Let us revise
- Long Division Method
- Word Problems



Division is repeated Subtraction



$$12 \div 3 = 4$$

Here, 12 is the **Dividend**.

3 is the **Divisor**.

4 is the **Quotient**.

0 is the **Remainder**.

$$\begin{array}{r}
 4 \leftarrow \text{Quotient} \\
 \text{Divisor} \rightarrow 3 \overline{)12} \leftarrow \text{Dividend} \\
 \underline{-12} \\
 0 \leftarrow \text{Remainder}
 \end{array}$$

- The number which is being divided is the **dividend**.
- The number by which the dividend is divided is called the **divisor**.
- The answer obtained after division is called the **quotient**.

Properties of Division

When any number is divided by itself, the quotient is 1.

$$6 \div 6 = 1$$

When any number is divided by 1, the quotient is the number itself.

$$8 \div 1 = 8$$

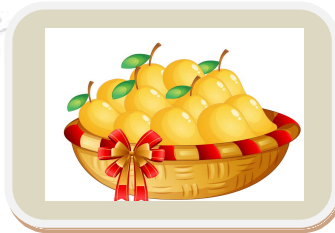
A number can not be divided by 0.

$$4 \div 0 \text{ is not possible}$$

Let us revise

1. A basket has 15 mangoes which are to be shared equally among 3 children. How many mangoes will each child will get?

$$\begin{array}{r} 15 \\ - 3 \\ \hline 12 \\ - 3 \\ \hline 9 \\ - 3 \\ \hline 6 \\ - 3 \\ \hline 3 \\ - 3 \\ \hline 0 \end{array}$$



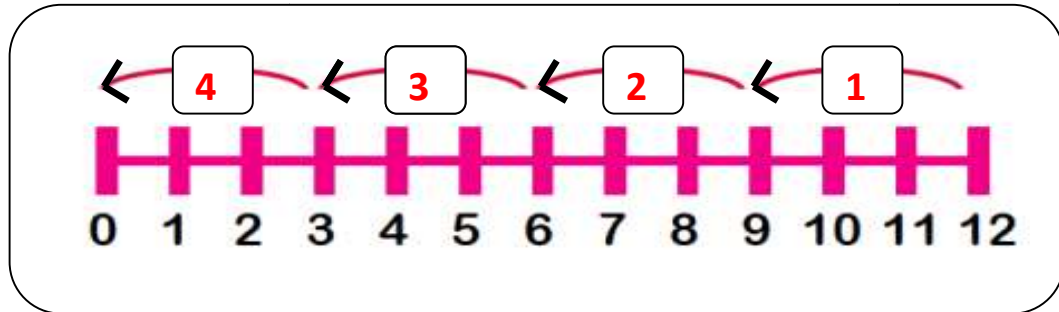
Division using repeated subtraction

1	2	3	4	5
$\begin{array}{r} 15 \\ - 3 \\ \hline 12 \end{array}$	$\begin{array}{r} 12 \\ - 3 \\ \hline 9 \end{array}$	$\begin{array}{r} 9 \\ - 3 \\ \hline 6 \end{array}$	$\begin{array}{r} 6 \\ - 3 \\ \hline 3 \end{array}$	$\begin{array}{r} 3 \\ - 3 \\ \hline 0 \end{array}$

Each child will get 5 mangoes.

2. Divide **12 by 3** using a number line.

$$12 \div 3 = \boxed{4}$$



3. Fill in the blanks.

$$12 \div 6 = \underline{2}$$

$$\underline{2} \times 6 = 12$$

~~$$12 \div 6 = 2$$

$$2 \times 6 = 12$$~~

Long Division Method

Divide 96 by 3.

$$\begin{array}{r}
 32 \\
 3 \overline{)96} \\
 \underline{-9} \\
 6 \\
 \underline{-6} \\
 0
 \end{array}$$

Method: **Start with the extreme left digit. Divide the tens by 3. 9 tens \div 3 = 3 tens. ($3 \times 3 = 9$)**
Write 3 above 9 in the tens' place and subtract the product from the tens digit. $9 - (3 \times 3) = 9 - 9 = 0$
Write the difference and copy the ones digit 6 below ones' place.
Divide the ones by 3. $6 \text{ ones} \div 3 = 2 \text{ ones. } (3 \times 2 = 6)$
Write 2 above 6 in the ones' place and subtract the product from the ones digit.
 $6 - (3 \times 2) = 6 - 6 = 0$

Divide 89 by 4.

$$\begin{array}{r}
 22 \\
 4 \overline{)89} \\
 \underline{-8} \\
 9 \\
 \underline{-8} \\
 1 \leftarrow \text{Remainder}
 \end{array}$$

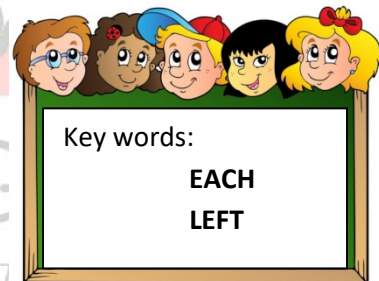
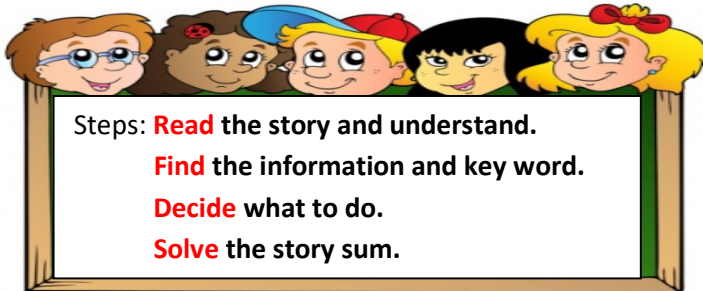
Method: **Divide the tens by 4.** $4 \times 2 = 8$, i.e. $8 \text{ tens} \div 4 = 2 \text{ tens}$. **Write 2 above 8 in the tens' place and subtract the product from the tens digit.** $8 - 4(4 \times 2) = 8 - 8 = 0$

Write the difference and copy the ones digit below ones' place.

Divide the ones by 4. Now, $4 \times 2 = 8$ and $4 \times 3 = 12$. $4 \times 3 = 12$. Since $12 > 9$, we take $4 \times 2 = 8$. $9 \text{ ones} \div 4 = 2 \text{ ones}$. **Write 2 above 9 in the ones' place and subtract the product from the ones digit.** $9 - (4 \times 2) = 9 - 8 = 1$, Here 1 is called the remainder.

Word Problems

To solve the word problems, following points are to be kept in mind.



Divide 48 sweets equally among 6 children.

Solution:

Number of sweets = 48

Number of children = 6

Number of sweets of each child = $48 \div 6 = 8$

Ans. Each child will get 8 sweets.

$$\begin{array}{r}
 8 \\
 6 \overline{)48} \\
 \underline{-48} \\
 0
 \end{array}$$

MIND MAP

