

DIVISION

(Long Division without Remainder)

Long division is a method of finding remainder for the division problems. By following the basic rules of long division, we can solve a division problem of any number length.

DIVISION RULES:

EXAMPLE: $34 \div 2$

1) **DIVIDE!**

2 goes into 3 one time.
Write 1 above 3.



$$\begin{array}{r} 1 \\ 2 \overline{) 34} \end{array}$$

2) **MULTIPLY!**

$\rightarrow 2 \times 1 = 2$
Write 2 under 3



$$\begin{array}{r} 1 \\ 2 \overline{) 34} \\ \underline{2} \end{array}$$

3) **SUBTRACT!**

$2 - 3 = 1$



$$\begin{array}{r} 1 \\ 2 \overline{) 34} \\ \underline{-2} \\ 1 \end{array}$$

4) **Repeat** the process

Since 2 doesn't go into 1, so bring down 4 to
Carry out division.



$$\begin{array}{r} 1 \\ 2 \overline{) 34} \\ \underline{2} \\ 1 \end{array}$$

5) Now, 2 goes into 14 exactly

seven times. $14 \div 2 = 7$
Write 7 above 4.



$$\begin{array}{r} 17 \\ 2 \overline{) 34} \\ \underline{2} \\ 1 \end{array}$$

6) Again, multiply and subtract to get the remainder.

$\rightarrow 2 \times 7 = 14$ and then
 $14 - 14 = 0$ i.e remainder



$$\begin{array}{r} 17 \\ 2 \overline{) 34} \\ \underline{2} \\ 1 \\ \underline{-14} \\ 0 \end{array}$$

DIVISION FACTS!

When the divisor is 1, the quotient is the number itself.

$$23 \div 1 = 23$$

Division by zero is not possible

When the dividend and the divisor are same, the quotient is 1.

$$45 \div 45 = 1$$

We add a zero in the quotient to bring down another number from dividend if the divisor can't divide the number.

Since no more number in the dividend is left. **14 is the required quotient.**