

DIVISION

(Long Division with Remainder)

Long division is a method of finding the quotient and remainder in division problems. Division is actually the equal sharing of things, but some sometimes we cannot divide things equally and there is a number left at the end which is the '*remainder*'.

Finding remainder is easy! Follow the simple division rules.

Example: $139 \div 6 = \underline{23 \text{ R } 1}$

Solution:

Since the first digit of the dividend is Less than the divisor we will take the first Two digits together and then divide by the Divisor.

→ 6 goes into 13 two times.
Write 2 in quotient place.

Now multiply! $6 \times 2 = 12$
Write 12 under 13

Now Subtract! $13 - 12 = 1$

Now bring down the next number i.e. 9
Since $1 < 6$.

Now repeat the same process.
Divide, multiply and subtract.

-> $6 \times 3 = 18$
-> $19 - 18 = 1$

Remainder=1
Quotient=23

$$\begin{array}{r} 2 \\ 6 \overline{) 139} \end{array}$$



Since $1 < 6$, so
We'll divide 13
by 6.

$$\begin{array}{r} 2 \\ 6 \overline{) 139} \\ \underline{12} \end{array}$$

$$\begin{array}{r} 2 \\ 6 \overline{) 139} \\ \underline{-12} \\ 1 \end{array}$$

$$\begin{array}{r} 2 \\ 6 \overline{) 139} \\ \underline{-12} \downarrow \\ 19 \end{array}$$

$$\begin{array}{r} 23 \\ 6 \overline{) 139} \\ \underline{-12} \\ 19 \\ \underline{18} \\ 1 \end{array}$$

Quotient!

Remainder!