

LONG DIVISION: DIVIDING 2 AND 3 DIGIT BY 1 DIGIT NUMBERS

The division algorithm is based on the following Euclid lemma:

$$a = bq + r$$

$$a, b, q, r \in \mathbb{Z}; b > 0; 0 \leq r < b$$

Where: a= Dividend.

b=Divisor.

q=Quotient.

r=Remainder.

KNOWLEDGE FOR THE WORLD



TEXAN
GLOBAL SCHOOL
Global Online Learning

www.texanglobalschool.com



YouTube



EXAMPLE: Perform the following operation:

$$54 \div 3 =$$

SOLUTION:

$$\begin{array}{r} 54 \Rightarrow \text{Dividend} \\ 3 \Rightarrow \text{Divisor} \end{array}$$

CONCLUSION:

$$54 \div 3 = 18$$

VERIFICATION:

$$54 = 3 \times 18 + 0$$

$$\begin{array}{r} \text{T O} \\ 18 \Rightarrow \text{Quotient} \\ 3 \overline{) 54} \\ \underline{- 3} \\ 24 \\ \underline{- 24} \\ 0 \Rightarrow \text{Remainder} \end{array}$$

EXAMPLE: Perform the following operation:

$$534 \div 2 =$$

SOLUTION:

$$\begin{array}{r} 534 \Rightarrow \text{Dividend} \\ 2 \Rightarrow \text{Divisor} \end{array}$$

CONCLUSION:

$$534 \div 2 = 267$$

VERIFICATION:

$$534 = 2 \times 267 + 0$$

$$\begin{array}{r} \text{H T O} \\ 267 \Rightarrow \text{Quotient} \\ 2 \overline{) 534} \\ \underline{- 4} \\ 13 \\ \underline{- 12} \\ 14 \\ \underline{- 14} \\ 0 \Rightarrow \text{Remainder} \end{array}$$