

Two-Digit Divisor

When the divisor has two digits, long division works the same way, but instead of using facts from multiplication tables when dividing, we might have to use pencil and paper to perform helping multiplications on the side, so to speak.

$$14 \overline{) 7434}$$

14 goes into 7 zero times, so we look at 74. To find how many times does 14 go into 74, you probably have to do several guesses. Check until you find the **maximum** number of times that 14 goes into 74.

$$2 \times 14 = 28 \quad 4 \times 14 = 56 \quad 5 \times 14 = 70 \quad 6 \times 14 = 84$$

From this we can see that 14 goes into 74 five times.

$$\begin{array}{r} 5 \\ 14 \overline{) 7434} \\ \underline{-70} \\ 43 \end{array}$$

Now, how many times does 14 go into 43?

$$2 \times 14 = 28 \quad 3 \times 14 = 42 \quad 4 \times 14 = 56$$

From this we can see that 14 goes into 43 three times.

$$\begin{array}{r} 531 \\ 14 \overline{) 7434} \\ \underline{-70} \\ 43 \\ \underline{-42} \\ 14 \end{array}$$

At this point it is easy: how many times does 14 go into 14?

That is exactly once, so the division is exact and over.

You should check here if the answer was right:

$$\begin{array}{r} 531 \\ \times 14 \\ \hline \end{array}$$

Go through this example with your teacher.

Table of 17:

$$\begin{array}{l} 2 \times 17 = 34 \\ 3 \times 17 = 51 \\ 4 \times 17 = 68 \\ 5 \times 17 = 85 \\ 6 \times 17 = 102 \end{array}$$

$$17 \overline{) 3995}$$

$$\begin{array}{r} 23 \\ 17 \overline{) 3995} \\ \underline{-34} \\ 59 \end{array}$$

$$\begin{array}{r} 235 \\ 17 \overline{) 3995} \\ \underline{-34} \\ 59 \\ \underline{-51} \\ 85 \end{array}$$