



To solve long division problems all you have to remember is 5 simple steps:

- | | | | | |
|-----------|----------|----------|---------|------------|
| 1 | 2 | 3 | 4 | 5 |
| Determine | Multiply | Subtract | Compare | Bring Down |

Lets look at those steps in depth below to solve the problem:

$$95 \div 4 = \underline{\quad}$$

$$\begin{array}{r} 2 \\ 4 \overline{) 95} \end{array}$$

1) Determine	
A.	4 times <u> </u> = is as close as you can get to 9 WITHOUT going over.
B.	$4 \times 0 = 0$ (0 isn't more than 9) ✓ $4 \times 1 = 4$ (4 isn't more than 9) ✓ $4 \times 2 = 8$ (8 isn't more than 9) ✓ $4 \times 3 = 12$ (12 IS more than 9) ✗
C.	We have to use 2, since 4×2 is as close to 9 as we can get without going over.
D.	Place the 2 over the 9.

$$\begin{array}{r} \times 2 \\ 4 \overline{) 95} \\ 8 \end{array}$$

2) Multiply	
A.	Multiply 2×4
B.	$2 \times 4 = 8$
C.	Place the 8 directly under the 9.

$$\begin{array}{r} 2 \\ 4 \overline{) 95} \\ - 8 \\ \hline 1 \end{array}$$

3) Subtract	
A.	Subtract $9 - 8$
B.	$9 - 8 = 1$
C.	Place the 1 in the appropriate spot.

$$\begin{array}{r} 2 \\ 4 \overline{) 95} \\ - 8 \\ \hline 1 \end{array}$$

4) Compare	
A.	Compare your answer to the divisor (4).
B.	Is 1 less than 4? Yes. $1 < 4$. Move on to step 5.
C.	If not, double check the previous steps to find your mistake.

$$\begin{array}{r} 2 \\ 4 \overline{) 95} \\ - 8 \downarrow \\ \hline 15 \end{array}$$

5) Bring Down	
A.	Now we bring down our next number.
B.	That turns our 1 into 15.
C.	Start over from step 1 (at the top)

$$\begin{array}{r} 23 \\ 4 \overline{) 95} \\ - 8 \\ \hline 15 \end{array}$$

1) Determine	
A.	4 times <u> </u> = is as close as you can get to 15 WITHOUT going over.
B.	$4 \times 2 = 8$ (8 isn't more than 15) ✓ $4 \times 3 = 12$ (12 isn't more than 15) ✓ $4 \times 4 = 16$ (16 IS more than 15) ✗
C.	We have to use 3, since 4×3 is as close to 15 as we can get without going over.
D.	Place the 3 over the 5.

$$\begin{array}{r} \times 23 \\ 4 \overline{) 95} \\ - 8 \\ \hline 15 \end{array}$$

2) Multiply	
A.	Multiply 3×4
B.	$3 \times 4 = 12$
C.	Place the 12 directly under the 15.

$$\begin{array}{r} 23 \\ 4 \overline{) 95} \\ - 8 \\ \hline 15 \\ - 12 \\ \hline 3 \end{array}$$

3) Subtract	
A.	Subtract $15 - 12$
B.	$15 - 12 = 3$
C.	Place the 3 in the appropriate spot.

$$\begin{array}{r} 23 \\ 4 \overline{) 95} \\ - 8 \\ \hline 15 \\ - 12 \\ \hline 3 \end{array}$$

4) Compare	
A.	Compare your answer to the divisor (4).
B.	Is 3 less than 4? Yes. $3 < 4$. Move on to step 5.
C.	If not, double check the previous steps to find your mistake.

$$\begin{array}{r} 23 \text{ r}3 \\ 4 \overline{) 95} \\ - 8 \\ \hline 15 \\ - 12 \\ \hline 3 \end{array}$$

5) Bring Down	
A.	There is nothing to bring down!
B.	That means the 3 becomes a remainder.
C.	So $95 \div 4 = 23 \text{ r}3$

Things to Remember

- Make sure you have a number over each of the digits (even if the number is a 0).
- Your remainder MUST be less than your divisor.
- If you get a remainder of 0. You don't need to even put the remainder.