

# Solved Long Division Problems with Step-By-Step Walkthrough

Steps:   (1) Divide    (2) Multiply    (3) Subtract    (4) Bring down the next number    (5) Repeat if needed

*Solutions are on page 2*

(1) <div>75   6631542</div>	(2) <div>23   5977105</div>	(3) <div>82   2624154</div>
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# Solved Long Division Problems with Step-By-Step Walkthrough

Steps: (1) Divide (2) Multiply (3) Subtract (4) Bring down the next number (5) Repeat if needed

*Also see our Worksheets and Walkthroughs video: "Division - Traditional Long Division Algorithm Method Word Problems"*

(1)

$$\begin{array}{r} \phantom{00}88420\text{ R}42 \\ 75 \overline{)6631542} \\ - \underline{600} \qquad (8x75) \\ \phantom{-}\phantom{00}631 \\ - \underline{600} \qquad (8x75) \\ \phantom{-}\phantom{00}\phantom{00}315 \\ - \underline{300} \qquad (4x75) \\ \phantom{-}\phantom{00}\phantom{00}\phantom{00}154 \\ - \underline{150} \qquad (2x75) \\ \phantom{-}\phantom{00}\phantom{00}\phantom{00}\phantom{00}42 \\ - \underline{0} \qquad (0x75) \\ \phantom{-}\phantom{00}\phantom{00}\phantom{00}\phantom{00}\phantom{00}42 \end{array}$$

*Remainder -->*

## Divide, Multiply, Subtract, Bring down, Repeat

Divide 75 into 663 ( = 8 )  
Multiply 8 times 75 ( = 600 )  
Subtract 600 from 663 ( = 63 )  
Bring down the 1

Divide 75 into 631 ( = 8 )  
 Multiply 8 times 75 ( = 600 )  
 Subtract 600 from 631 ( = 31 )  
 Bring down the 5

Divide 75 into 315 ( $= 4$ )  
 Multiply 4 times 75 ( $= 300$ )  
 Subtract 300 from 315 ( $= 15$ )  
 Bring down the 4

Divide 75 into 154 ( = 2 )  
Multiply 2 times 75 ( = 150 )  
Subtract 150 from 154 ( = 4 )  
Bring down the 2

Divide 75 into 42 ( $= 0$ )  
 Multiply 0 times 75 ( $= 0$ )  
 Subtract 0 from 42 ( $= 42$ )  
 Done. No more numbers to bring down.

(2)

$$\begin{array}{r} 259874 \text{ R } 3 \\ 23 \overline{) 5977105} \\ - 46 \phantom{00} \quad (2 \times 23) \\ \hline 137 \phantom{00} \\ - 115 \phantom{00} \quad (5 \times 23) \\ \hline 227 \phantom{00} \\ - 207 \phantom{00} \quad (9 \times 23) \\ \hline 201 \phantom{00} \\ - 184 \phantom{00} \quad (8 \times 23) \\ \hline 170 \phantom{00} \\ - 161 \phantom{00} \quad (7 \times 23) \\ \hline 95 \phantom{00} \\ - 92 \phantom{00} \quad (4 \times 23) \\ \hline 3 \end{array}$$

Remainder -->

*Remainder -->*

## Divide, Multiply, Subtract, Bring down, Repeat

Divide 23 into 59 ( = 2 )  
Multiply 2 times 23 ( = 46 )  
Subtract 46 from 59 ( = 13 )  
Bring down the 7

Divide 23 into 137 ( = 5 )  
 Multiply 5 times 23 ( = 115 )  
 Subtract 115 from 137 ( = 22 )  
 Bring down the 7

Divide 23 into 227 ( = 9 )  
Multiply 9 times 23 ( = 207 )  
Subtract 207 from 227 ( = 20 )  
Bring down the 1

Divide 23 into 201 ( = 8 )  
Multiply 8 times 23 ( = 184 )  
Subtract 184 from 201 ( = 17 )  
Bring down the 0

Divide 23 into 170 ( = 7 )  
Multiply 7 times 23 ( = 161 )  
Subtract 161 from 170 ( = 9 )  
Bring down the 5

Divide 23 into 95 ( = 4 )  
 Multiply 4 times 23 ( = 92 )  
 Subtract 92 from 95 ( = 3 )  
 Done. No more numbers to bring down.

(3)

$$\begin{array}{r} 32001 \text{ R}72 \\ 82 \overline{) 2624154} \\ \underline{- 246} \phantom{000} \quad (3 \times 82) \\ 164 \phantom{000} \\ \underline{- 164} \phantom{000} \quad (2 \times 82) \\ 01 \phantom{000} \\ \underline{- 0} \phantom{000} \quad (0 \times 82) \\ 15 \phantom{000} \\ \underline{- 0} \phantom{000} \quad (0 \times 82) \\ 154 \phantom{00} \\ \underline{- 82} \phantom{00} \quad (1 \times 82) \\ \hline \text{Remainder} \rightarrow 72 \end{array}$$

*Remainder -->*

### Divide, Multiply, Subtract, Bring down, Repeat

Divide 82 into 262 ( = 3 )  
Multiply 3 times 82 ( = 246 )  
Subtract 246 from 262 ( = 16 )  
Bring down the 4

Divide 82 into 164 ( = 2 )  
 Multiply 2 times 82 ( = 164 )  
 Subtract 164 from 164 ( = 0 )  
 Bring down the 1

Divide 82 into 01 ( = 0 )  
 Multiply 0 times 82 ( = 0 )  
 Subtract 0 from 01 ( = 1 )  
 Bring down the 5

Divide 82 into 15 ( $= 0$ )  
Multiply 0 times 82 ( $= 0$ )  
Subtract 0 from 15 ( $= 15$ )  
Bring down the 4

Divide 82 into 154 ( = 1 )  
 Multiply 1 times 82 ( = 82 )  
 Subtract 82 from 154 ( = 72 )  
 Done. No more numbers to bring down.