# 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)

$$3\overline{)50890}$$

(2)

$$9\overline{)91230}$$

(3)

$$4\overline{)38130}$$

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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)**

```
            16963 R1
        ┌──────────
      3 │ 50890
        −  3              ( 1 x 3 )
           ────
           20
        −  18             ( 6 x 3 )
           ────
           28
        −  27             ( 9 x 3 )
           ────
           19
        −  18             ( 6 x 3 )
           ────
           10
        −   9             ( 3 x 3 )
           ────
```
*Remainder -->*        1

Divide, Multiply, Subtract, Bring down, Repeat

Divide 3 into 5 ( = 1 )
Multiply 1 times 3 ( = 3 )
Subtract 3 from 5 ( = 2 )
Bring down the 0

Divide 3 into 20 ( = 6 )
Multiply 6 times 3 ( = 18 )
Subtract 18 from 20 ( = 2 )
Bring down the 8

Divide 3 into 28 ( = 9 )
Multiply 9 times 3 ( = 27 )
Subtract 27 from 28 ( = 1 )
Bring down the 9

Divide 3 into 19 ( = 6 )
Multiply 6 times 3 ( = 18 )
Subtract 18 from 19 ( = 1 )
Bring down the 0

Divide 3 into 10 ( = 3 )
Multiply 3 times 3 ( = 9 )
Subtract 9 from 10 ( = 1 )
Done. No more numbers to bring down.

**(2)**

```
            10136 R6
        ┌──────────
      9 │ 91230
        −  9              ( 1 x 9 )
           ────
           01
        −   0             ( 0 x 9 )
           ────
           12
        −   9             ( 1 x 9 )
           ────
           33
        −  27             ( 3 x 9 )
           ────
           60
        −  54             ( 6 x 9 )
           ────
```
*Remainder -->*        6

Divide, Multiply, Subtract, Bring down, Repeat

Divide 9 into 9 ( = 1 )
Multiply 1 times 9 ( = 9 )
Subtract 9 from 9 ( = 0 )
Bring down the 1

Divide 9 into 01 ( = 0 )
Multiply 0 times 9 ( = 0 )
Subtract 0 from 01 ( = 1 )
Bring down the 2

Divide 9 into 12 ( = 1 )
Multiply 1 times 9 ( = 9 )
Subtract 9 from 12 ( = 3 )
Bring down the 3

Divide 9 into 33 ( = 3 )
Multiply 3 times 9 ( = 27 )
Subtract 27 from 33 ( = 6 )
Bring down the 0

Divide 9 into 60 ( = 6 )
Multiply 6 times 9 ( = 54 )
Subtract 54 from 60 ( = 6 )
Done. No more numbers to bring down.

**(3)**

```
            9532 R2
        ┌──────────
      4 │ 38130
        −  36             ( 9 x 4 )
           ────
           21
        −  20             ( 5 x 4 )
           ────
           13
        −  12             ( 3 x 4 )
           ────
           10
        −   8             ( 2 x 4 )
           ────
```
*Remainder -->*        2

Divide, Multiply, Subtract, Bring down, Repeat

Divide 4 into 38 ( = 9 )
Multiply 9 times 4 ( = 36 )
Subtract 36 from 38 ( = 2 )
Bring down the 1

Divide 4 into 21 ( = 5 )
Multiply 5 times 4 ( = 20 )
Subtract 20 from 21 ( = 1 )
Bring down the 3

Divide 4 into 13 ( = 3 )
Multiply 3 times 4 ( = 12 )
Subtract 12 from 13 ( = 1 )
Bring down the 0

Divide 4 into 10 ( = 2 )
Multiply 2 times 4 ( = 8 )
Subtract 8 from 10 ( = 2 )
Done. No more numbers to bring down.