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)

$17\overline{)511802}$

(2)

$72\overline{)609712}$

(3)

$26\overline{)517723}$

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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)

```
            30106 R0
        _____
   17 | 511802
        -  51              ( 3 x 17 )
           ___
           01
        -   0              ( 0 x 17 )
           ___
           18
        -  17              ( 1 x 17 )
           ___
           10
        -   0              ( 0 x 17 )
           ___
           102
        - 102              ( 6 x 17 )
           ___
                  0
```
Remainder -->

Divide, Multiply, Subtract, Bring down, Repeat

Divide 17 into 51 (= 3)
Multiply 3 times 17 (= 51)
Subtract 51 from 51 (= 0)
Bring down the 1

Divide 17 into 01 (= 0)
Multiply 0 times 17 (= 0)
Subtract 0 from 01 (= 1)
Bring down the 8

Divide 17 into 18 (= 1)
Multiply 1 times 17 (= 17)
Subtract 17 from 18 (= 1)
Bring down the 0

Divide 17 into 10 (= 0)
Multiply 0 times 17 (= 0)
Subtract 0 from 10 (= 10)
Bring down the 2

Divide 17 into 102 (= 6)
Multiply 6 times 17 (= 102)
Subtract 102 from 102 (= 0)
Done. No more numbers to bring down.

(2)

```
            8468 R16
        _____
   72 | 609712
        - 576              ( 8 x 72 )
          ___
          337
        - 288              ( 4 x 72 )
          ___
          491
        - 432              ( 6 x 72 )
          ___
          592
        - 576              ( 8 x 72 )
          ___
                16
```
Remainder -->

Divide, Multiply, Subtract, Bring down, Repeat

Divide 72 into 609 (= 8)
Multiply 8 times 72 (= 576)
Subtract 576 from 609 (= 33)
Bring down the 7

Divide 72 into 337 (= 4)
Multiply 4 times 72 (= 288)
Subtract 288 from 337 (= 49)
Bring down the 1

Divide 72 into 491 (= 6)
Multiply 6 times 72 (= 432)
Subtract 432 from 491 (= 59)
Bring down the 2

Divide 72 into 592 (= 8)
Multiply 8 times 72 (= 576)
Subtract 576 from 592 (= 16)
Done. No more numbers to bring down.

(3)

```
            19912 R11
        _____
   26 | 517723
        -  26             ( 1 x 26 )
           ___
           257
        - 234             ( 9 x 26 )
           ___
           237
        - 234             ( 9 x 26 )
           ___
            32
        -  26             ( 1 x 26 )
           ___
            63
        -  52             ( 2 x 26 )
           ___
                 11
```
Remainder -->

Divide, Multiply, Subtract, Bring down, Repeat

Divide 26 into 51 (= 1)
Multiply 1 times 26 (= 26)
Subtract 26 from 51 (= 25)
Bring down the 7

Divide 26 into 257 (= 9)
Multiply 9 times 26 (= 234)
Subtract 234 from 257 (= 23)
Bring down the 7

Divide 26 into 237 (= 9)
Multiply 9 times 26 (= 234)
Subtract 234 from 237 (= 3)
Bring down the 2

Divide 26 into 32 (= 1)
Multiply 1 times 26 (= 26)
Subtract 26 from 32 (= 6)
Bring down the 3

Divide 26 into 63 (= 2)
Multiply 2 times 26 (= 52)
Subtract 52 from 63 (= 11)
Done. No more numbers to bring down.