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)

$$6 \overline{)179398}$$

(2)

$$7 \overline{)522040}$$

(3)

$$5 \overline{)586730}$$

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

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(1)

```
        29899 R4
      _____
   6 | 179398
     -  12          ( 2 x 6 )
       ____
        59
      -  54          ( 9 x 6 )
        ____
         53
       -  48          ( 8 x 6 )
         ____
          59
        -  54          ( 9 x 6 )
          ____
           58
         -  54          ( 9 x 6 )
           ____
```
Remainder -->   4

Divide, Multiply, Subtract, Bring down, Repeat

Divide 6 into 17 (= 2)
Multiply 2 times 6 (= 12)
Subtract 12 from 17 (= 5)
Bring down the 9

Divide 6 into 59 (= 9)
Multiply 9 times 6 (= 54)
Subtract 54 from 59 (= 5)
Bring down the 3

Divide 6 into 53 (= 8)
Multiply 8 times 6 (= 48)
Subtract 48 from 53 (= 5)
Bring down the 9

Divide 6 into 59 (= 9)
Multiply 9 times 6 (= 54)
Subtract 54 from 59 (= 5)
Bring down the 8

Divide 6 into 58 (= 9)
Multiply 9 times 6 (= 54)
Subtract 54 from 58 (= 4)
Done. No more numbers to bring down.

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(2)

```
        74577 R1
      _____
   7 | 522040
     -  49          ( 7 x 7 )
       ____
        32
      -  28          ( 4 x 7 )
        ____
         40
       -  35          ( 5 x 7 )
         ____
          54
        -  49          ( 7 x 7 )
          ____
           50
         -  49          ( 7 x 7 )
           ____
```
Remainder -->   1

Divide, Multiply, Subtract, Bring down, Repeat

Divide 7 into 52 (= 7)
Multiply 7 times 7 (= 49)
Subtract 49 from 52 (= 3)
Bring down the 2

Divide 7 into 32 (= 4)
Multiply 4 times 7 (= 28)
Subtract 28 from 32 (= 4)
Bring down the 0

Divide 7 into 40 (= 5)
Multiply 5 times 7 (= 35)
Subtract 35 from 40 (= 5)
Bring down the 4

Divide 7 into 54 (= 7)
Multiply 7 times 7 (= 49)
Subtract 49 from 54 (= 5)
Bring down the 0

Divide 7 into 50 (= 7)
Multiply 7 times 7 (= 49)
Subtract 49 from 50 (= 1)
Done. No more numbers to bring down.

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(3)

```
        117346 R0
      _____
   5 | 586730
     -  5          ( 1 x 5 )
       ____
        08
      -  5          ( 1 x 5 )
        ____
         36
       -  35          ( 7 x 5 )
         ____
          17
        -  15          ( 3 x 5 )
          ____
           23
         -  20          ( 4 x 5 )
           ____
            30
          -  30          ( 6 x 5 )
            ____
```
Remainder -->   0

Divide, Multiply, Subtract, Bring down, Repeat

Divide 5 into 5 (= 1)
Multiply 1 times 5 (= 5)
Subtract 5 from 5 (= 0)
Bring down the 8

Divide 5 into 08 (= 1)
Multiply 1 times 5 (= 5)
Subtract 5 from 08 (= 3)
Bring down the 6

Divide 5 into 36 (= 7)
Multiply 7 times 5 (= 35)
Subtract 35 from 36 (= 1)
Bring down the 7

Divide 5 into 17 (= 3)
Multiply 3 times 5 (= 15)
Subtract 15 from 17 (= 2)
Bring down the 3

Divide 5 into 23 (= 4)
Multiply 4 times 5 (= 20)
Subtract 20 from 23 (= 3)
Bring down the 0

Divide 5 into 30 (= 6)
Multiply 6 times 5 (= 30)
Subtract 30 from 30 (= 0)
Done. No more numbers to bring down.