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)

$$19\overline{)421430}$$

(2)

$$18\overline{)864291}$$

(3)

$$81\overline{)232713}$$

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

(1)
```
            22180 R10
     ┌─────────────
  19 │ 421430
     −  38              ( 2 x 19 )
        ─────
        41
     −  38              ( 2 x 19 )
        ─────
        34
     −  19              ( 1 x 19 )
        ─────
        153
     −  152             ( 8 x 19 )
        ─────
        10
     −   0              ( 0 x 19 )
        ─────
```
Remainder -->   10

Divide, Multiply, Subtract, Bring down, Repeat

Divide 19 into 42 (= 2)
Multiply 2 times 19 (= 38)
Subtract 38 from 42 (= 4)
Bring down the 1

Divide 19 into 41 (= 2)
Multiply 2 times 19 (= 38)
Subtract 38 from 41 (= 3)
Bring down the 4

Divide 19 into 34 (= 1)
Multiply 1 times 19 (= 19)
Subtract 19 from 34 (= 15)
Bring down the 3

Divide 19 into 153 (= 8)
Multiply 8 times 19 (= 152)
Subtract 152 from 153 (= 1)
Bring down the 0

Divide 19 into 10 (= 0)
Multiply 0 times 19 (= 0)
Subtract 0 from 10 (= 10)
Done. No more numbers to bring down.

(2)
```
            48016 R3
     ┌─────────────
  18 │ 864291
     −  72              ( 4 x 18 )
        ─────
        144
     −  144             ( 8 x 18 )
        ─────
        02
     −   0              ( 0 x 18 )
        ─────
        29
     −  18              ( 1 x 18 )
        ─────
        111
     −  108             ( 6 x 18 )
        ─────
```
Remainder -->   3

Divide, Multiply, Subtract, Bring down, Repeat

Divide 18 into 86 (= 4)
Multiply 4 times 18 (= 72)
Subtract 72 from 86 (= 14)
Bring down the 4

Divide 18 into 144 (= 8)
Multiply 8 times 18 (= 144)
Subtract 144 from 144 (= 0)
Bring down the 2

Divide 18 into 02 (= 0)
Multiply 0 times 18 (= 0)
Subtract 0 from 02 (= 2)
Bring down the 9

Divide 18 into 29 (= 1)
Multiply 1 times 18 (= 18)
Subtract 18 from 29 (= 11)
Bring down the 1

Divide 18 into 111 (= 6)
Multiply 6 times 18 (= 108)
Subtract 108 from 111 (= 3)
Done. No more numbers to bring down.

(3)
```
            2873 R0
     ┌─────────────
  81 │ 232713
     −  162             ( 2 x 81 )
        ─────
        707
     −  648             ( 8 x 81 )
        ─────
        591
     −  567             ( 7 x 81 )
        ─────
        243
     −  243             ( 3 x 81 )
        ─────
```
Remainder -->   0

Divide, Multiply, Subtract, Bring down, Repeat

Divide 81 into 232 (= 2)
Multiply 2 times 81 (= 162)
Subtract 162 from 232 (= 70)
Bring down the 7

Divide 81 into 707 (= 8)
Multiply 8 times 81 (= 648)
Subtract 648 from 707 (= 59)
Bring down the 1

Divide 81 into 591 (= 7)
Multiply 7 times 81 (= 567)
Subtract 567 from 591 (= 24)
Bring down the 3

Divide 81 into 243 (= 3)
Multiply 3 times 81 (= 243)
Subtract 243 from 243 (= 0)
Done. No more numbers to bring down.