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)

$$82 \overline{)8385213}$$

(2)

$$80 \overline{)8390165}$$

(3)

$$20 \overline{)4377396}$$

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

(1)

```
      102258 R57
82 | 8385213
   - 82          ( 1 x 82 )
     18
   - 0           ( 0 x 82 )
     185
   - 164         ( 2 x 82 )
      212
   - 164         ( 2 x 82 )
       481
   - 410         ( 5 x 82 )
       713
   - 656         ( 8 x 82 )
        57
```

Remainder --> 57

Divide, Multiply, Subtract, Bring down, Repeat

Divide 82 into 83 (= 1)
Multiply 1 times 82 (= 82)
Subtract 82 from 83 (= 1)
Bring down the 8

Divide 82 into 18 (= 0)
Multiply 0 times 82 (= 0)
Subtract 0 from 18 (= 18)
Bring down the 5

Divide 82 into 185 (= 2)
Multiply 2 times 82 (= 164)
Subtract 164 from 185 (= 21)
Bring down the 2

Divide 82 into 212 (= 2)
Multiply 2 times 82 (= 164)
Subtract 164 from 212 (= 48)
Bring down the 1

Divide 82 into 481 (= 5)
Multiply 5 times 82 (= 410)
Subtract 410 from 481 (= 71)
Bring down the 3

Divide 82 into 713 (= 8)
Multiply 8 times 82 (= 656)
Subtract 656 from 713 (= 57)
Done. No more numbers to bring down.

(2)

```
      104877 R5
80 | 8390165
   - 80          ( 1 x 80 )
     39
   - 0           ( 0 x 80 )
     390
   - 320         ( 4 x 80 )
      701
   - 640         ( 8 x 80 )
       616
   - 560         ( 7 x 80 )
       565
   - 560         ( 7 x 80 )
         5
```

Remainder --> 5

Divide, Multiply, Subtract, Bring down, Repeat

Divide 80 into 83 (= 1)
Multiply 1 times 80 (= 80)
Subtract 80 from 83 (= 3)
Bring down the 9

Divide 80 into 39 (= 0)
Multiply 0 times 80 (= 0)
Subtract 0 from 39 (= 39)
Bring down the 0

Divide 80 into 390 (= 4)
Multiply 4 times 80 (= 320)
Subtract 320 from 390 (= 70)
Bring down the 1

Divide 80 into 701 (= 8)
Multiply 8 times 80 (= 640)
Subtract 640 from 701 (= 61)
Bring down the 6

Divide 80 into 616 (= 7)
Multiply 7 times 80 (= 560)
Subtract 560 from 616 (= 56)
Bring down the 5

Divide 80 into 565 (= 7)
Multiply 7 times 80 (= 560)
Subtract 560 from 565 (= 5)
Done. No more numbers to bring down.

(3)

```
      218869 R16
20 | 4377396
   - 40          ( 2 x 20 )
     37
   - 20          ( 1 x 20 )
     177
   - 160         ( 8 x 20 )
      173
   - 160         ( 8 x 20 )
       139
   - 120         ( 6 x 20 )
       196
   - 180         ( 9 x 20 )
        16
```

Remainder --> 16

Divide, Multiply, Subtract, Bring down, Repeat

Divide 20 into 43 (= 2)
Multiply 2 times 20 (= 40)
Subtract 40 from 43 (= 3)
Bring down the 7

Divide 20 into 37 (= 1)
Multiply 1 times 20 (= 20)
Subtract 20 from 37 (= 17)
Bring down the 7

Divide 20 into 177 (= 8)
Multiply 8 times 20 (= 160)
Subtract 160 from 177 (= 17)
Bring down the 3

Divide 20 into 173 (= 8)
Multiply 8 times 20 (= 160)
Subtract 160 from 173 (= 13)
Bring down the 9

Divide 20 into 139 (= 6)
Multiply 6 times 20 (= 120)
Subtract 120 from 139 (= 19)
Bring down the 6

Divide 20 into 196 (= 9)
Multiply 9 times 20 (= 180)
Subtract 180 from 196 (= 16)
Done. No more numbers to bring down.