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)

$$8\overline{)40597}$$

(2)

$$6\overline{)69128}$$

(3)

$$3\overline{)86029}$$

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

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(1)

```
            5074 R5
      _____
   8 | 40597
      - 40              ( 5 x 8 )
      _____
        05
       - 0              ( 0 x 8 )
       _____
         59
       - 56             ( 7 x 8 )
       _____
         37
       - 32             ( 4 x 8 )
       _____
Remainder -->   5
```

Divide, Multiply, Subtract, Bring down, Repeat

Divide 8 into 40 (= 5)
Multiply 5 times 8 (= 40)
Subtract 40 from 40 (= 0)
Bring down the 5

Divide 8 into 05 (= 0)
Multiply 0 times 8 (= 0)
Subtract 0 from 05 (= 5)
Bring down the 9

Divide 8 into 59 (= 7)
Multiply 7 times 8 (= 56)
Subtract 56 from 59 (= 3)
Bring down the 7

Divide 8 into 37 (= 4)
Multiply 4 times 8 (= 32)
Subtract 32 from 37 (= 5)
Done. No more numbers to bring down.

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(2)

```
           11521 R2
      _____
   6 | 69128
      - 6               ( 1 x 6 )
      _____
        09
       - 6              ( 1 x 6 )
       _____
         31
       - 30             ( 5 x 6 )
       _____
         12
       - 12             ( 2 x 6 )
       _____
          08
         - 6            ( 1 x 6 )
         _____
Remainder -->  2
```

Divide, Multiply, Subtract, Bring down, Repeat

Divide 6 into 6 (= 1)
Multiply 1 times 6 (= 6)
Subtract 6 from 6 (= 0)
Bring down the 9

Divide 6 into 09 (= 1)
Multiply 1 times 6 (= 6)
Subtract 6 from 09 (= 3)
Bring down the 1

Divide 6 into 31 (= 5)
Multiply 5 times 6 (= 30)
Subtract 30 from 31 (= 1)
Bring down the 2

Divide 6 into 12 (= 2)
Multiply 2 times 6 (= 12)
Subtract 12 from 12 (= 0)
Bring down the 8

Divide 6 into 08 (= 1)
Multiply 1 times 6 (= 6)
Subtract 6 from 08 (= 2)
Done. No more numbers to bring down.

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(3)

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           28676 R1
      _____
   3 | 86029
      - 6               ( 2 x 3 )
      _____
        26
       - 24             ( 8 x 3 )
       _____
         20
       - 18             ( 6 x 3 )
       _____
         22
       - 21             ( 7 x 3 )
       _____
         19
       - 18             ( 6 x 3 )
       _____
Remainder -->  1
```

Divide, Multiply, Subtract, Bring down, Repeat

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

Divide 3 into 26 (= 8)
Multiply 8 times 3 (= 24)
Subtract 24 from 26 (= 2)
Bring down the 0

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

Divide 3 into 22 (= 7)
Multiply 7 times 3 (= 21)
Subtract 21 from 22 (= 1)
Bring down the 9

Divide 3 into 19 (= 6)
Multiply 6 times 3 (= 18)
Subtract 18 from 19 (= 1)
Done. No more numbers to bring down.