

# Zeros in the Quotient

Find  $816 \div 4$ .

**Step 1:** Compare the first digit of the dividend with the divisor.  $8 > 4$ , so the first digit in the quotient will go in the hundreds place.

Divide the hundreds.  
Think  $4 \times ? = 8$ .

Write 2 in the hundreds place of the quotient.  
Multiply.  $4 \times 2 = 8$

$$\begin{array}{r} 2 \\ 4 \overline{)81} \\ \underline{-8} \downarrow \\ 01 \end{array}$$

Subtract.  $8 - 8 = 0$

Compare.  $0 < 4$

Bring down the tens.

**Step 2:** Compare.  
 $1 < 4$

You cannot divide the tens, so place 0 in the tens place of the quotient.

Bring down the ones.

$$\begin{array}{r} 20 \\ 4 \overline{)816} \\ \underline{-8} \downarrow \\ 016 \end{array}$$

**Step 3:** Compare.  
 $16 > 4$

Divide the ones. Think  
 $4 \times ? = 16$ .

Write 4 in the ones place of the quotient.

Multiply.  $4 \times 4 = 16$

Subtract.  $16 - 16 = 0$

Compare.  $0 < 4$

There are no more digits to bring down, so the problem is done.

$$\begin{array}{r} 204 \\ 4 \overline{)816} \\ \underline{-8} \\ 016 \\ \underline{-16} \\ 0 \end{array}$$

**Step 4:** Check by multiplying.

$$4 \times 204 = 816$$

Find each quotient. Check your answers by multiplying.

1.  $8 \overline{)640}$

2.  $3 \overline{)322}$

3.  $4 \overline{)908}$

4.  $15 \overline{)225}$

5.  $6 \overline{)624}$

6.  $6 \overline{)965}$

7. Is  $593 \div 6$  a little less than 10, a little more than 10, a little less than 100, or a little more than 100? Explain.

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