

Name: \_\_\_\_\_

Date: \_\_\_\_\_

# Dividing Multi-Digit Numbers



When you divide one number by another, the number being divided is

the dividend. The number you divide by is the divisor.

The answer to a division problem is the quotient.

$$\text{dividend} \div \text{divisor} = \text{quotient}$$

## Steps to Division



Does Divide

McDonalds Multiply

Sell Subtract

Cheese Check your work

Burgers? Bring down and start over again!

Rare (Repeat)

Example 1:  $318 \div 16$

Handwritten solution for Example 1:

$$\begin{array}{r} 19 \text{ R } 14 \\ 16 \overline{) 318} \\ \underline{16} \phantom{0} \\ 158 \\ \underline{-144} \\ 14 \end{array}$$

Annotations: A thought bubble with '15' and '5' is next to the first step. The quotient '19 R 14' is boxed in red.

Example 2:  $8465 \div 91$

Handwritten solution for Example 2:

$$\begin{array}{r} 93 \text{ R } 2 \\ 91 \overline{) 8465} \\ \underline{-819} \phantom{0} \\ 275 \\ \underline{-273} \\ 2 \end{array}$$

Annotations: A thought bubble with '90' and '0' is next to the first step. The quotient '93 R 2' is boxed in red.

Handwritten multiplication check for Example 2:

$$\begin{array}{r} 91 \\ \times 3 \\ \hline 273 \end{array}$$

Handwritten multiplication check for Example 1:

$$\begin{array}{r} 5 \\ 16 \\ \times 9 \\ \hline 144 \end{array}$$

Now you try!

Example 3:  $878 \div 31$

28 R 10

Handwritten solution for Example 3:

$$\begin{array}{r} 28 \\ 31 \overline{) 878} \\ \underline{-62} \phantom{0} \\ 258 \\ \underline{-248} \\ 10 \end{array}$$

Annotations: A thought bubble with '30' and '0' is next to the first step. The quotient '28 R 10' is written in green. A multiplication check  $\begin{array}{r} 31 \\ \times 3 \\ \hline 93 \end{array}$  is shown to the right.

Example 4:  $4321 \div 56$

77 R 9

Handwritten solution for Example 4:

$$\begin{array}{r} 77 \\ 56 \overline{) 4321} \\ \underline{-392} \phantom{0} \\ 409 \\ \underline{-392} \\ 17 \end{array}$$

Annotations: A thought bubble with '90' and '0' is next to the first step. The quotient '77 R 9' is boxed in green. A multiplication check  $\begin{array}{r} 56 \\ \times 7 \\ \hline 392 \end{array}$  is shown to the right.

Ready for three-digit divisors?! Even though the numbers are bigger, we can use the same strategies!

Example 5:  $1,050 \div 350 = 3$

300 or 400

$$\begin{array}{r} \overset{\times \times \times}{350} \overline{) 1050} \\ \underline{-1050} \\ 0 \end{array}$$

$$\begin{array}{r} 350 \\ \times 3 \\ \hline 1050 \end{array}$$

Example 6:  $35,703 \div 785$

45 R 378

800

$$\begin{array}{r} \overset{\times \times \times}{785} \overline{) 35,703} \\ \underline{-3140} \\ 34303 \\ \underline{-3925} \\ 378 \end{array}$$

$$\begin{array}{r} 45 \\ \times 785 \\ \hline 3140 \\ \times 785 \\ \hline 3925 \end{array}$$

Example 7: The average person has 1,460 dreams a year. What is the average number of dreams a person has each night?



$$\begin{array}{r} \overset{\times \times \times}{365} \overline{) 1,460} \\ \underline{-1460} \\ 0 \end{array}$$

$$\begin{array}{r} 365 \\ \times 4 \\ \hline 1460 \end{array}$$

4 dreams per night

Now you try!

Example 8:  $16,100 \div 421$

38 R 102

Example 9:  $92,304 \div 586$

157 R 302

$$\begin{array}{r} \overset{\times \times \times}{421} \overline{) 16,100} \\ \underline{-1263} \\ 3470 \\ \underline{-3202} \\ 102 \end{array}$$

$$\begin{array}{r} 421 \\ \times 38 \\ \hline 1263 \\ \times 421 \\ \hline 16102 \end{array}$$

$$\begin{array}{r} \overset{\times \times \times}{586} \overline{) 92,304} \\ \underline{-586} \\ 23370 \\ \underline{-2930} \\ 4404 \\ \underline{-4102} \\ 302 \end{array}$$

$$\begin{array}{r} 157 \\ \times 586 \\ \hline 2930 \\ \times 586 \\ \hline 92302 \end{array}$$