EUREKA MATH™ TIPS FOR PARENTS

KEY CONCEPT OVERVIEW

In Topic C, students use estimation and the standard algorithm for division (see Sample Problems) to divide whole numbers and decimals. Students begin by working extensively with whole numbers to develop an understanding of each step of the algorithm and why it makes sense. The topic wraps up by extending this learning to division of multi-digit decimals.

You can expect to see homework that asks your child to do the following:

- Round to estimate the quotient. Then, use a calculator to compute the exact quotient, and compare the estimate to the exact quotient.
- Use mental math, estimation, and/or the division algorithm to divide whole numbers and multi-digit decimals (remembering to create a whole number divisor).
- Solve word problems by dividing whole numbers or decimals.
- Place the decimal point in the correct place to make a number sentence true.

SAMPLE PROBLEMS *(From Lesson 13)*

Estimate, and then use the standard algorithm to solve 952,448 ÷ 112.

a. Estimate: **1,000,000 ÷ 100 = 10,000**

b. Standard Algorithm:

```
                  8  5  0  4
1  1  2 | 9  5  2  4  4  8      952 thousands ÷ 112: 8 thousands
           ~~1~~
        – 8  9  6
           5  6  4              564 hundreds ÷ 112: 5 hundreds
              ~~1~~
        – 5  6  0
              4  4              44 tens ÷ 112: 0 tens
           –     0
              4  4  8           448 ones ÷ 112: 4 ones
           – 4  4  8
                 0
```

SAMPLE PROBLEMS *(continued) (From Lesson 14)*

In the problem below, first make the divisor a whole number by multiplying both the numerator and denominator by 10. Then divide, and check your answer.

$$3{,}581.9 \div 4.9$$

$$\frac{3{,}581.9}{4.9} \times \frac{10}{10} = \frac{35{,}819}{49}$$

$$\begin{array}{r} 7\ 3\ 1 \\ 49 \overline{)\ 3\ 5\ 8\ 1\ 9} \\ -\ 3\ 4\ 3 \\ \hline 1\ 5\ 1 \\ -\ 1\ 4\ 7 \\ \hline 4\ 9 \\ -\ 4\ 9 \\ \hline 0 \end{array}$$

Check:

$35{,}819 \div 49 = 731$

$731 \times 49 = 35{,}819$

$3{,}581.9 \div 4.9 = 731$

$731 \times 4.9 = 3{,}581.9$

Additional sample problems with detailed answer steps are found in the *Eureka Math Homework Helpers* books. Learn more at GreatMinds.org.

HOW YOU CAN HELP AT HOME

You can help at home in many ways. Here are some tips to help you get started.

- Complete a division problem with your child. First, estimate the answer. Then, take turns completing each step in the standard algorithm to find the actual answer. Compare the real answer to the estimate to be sure your answer makes sense. You can use whole numbers or decimals.
- David estimated 5,000 as the quotient for the problem 99,066 ÷ 19. Does his estimate make sense? With your child, discuss what David's thought process might have been when determining the estimate. (Your child should understand that David probably rounded the problem to 100,000 ÷ 20. Because this expression equals 5,000, David's estimate makes sense.)
- Reinforce the importance of estimation. Share some ways you use estimation in the real world. For example, estimate how long it will take you to run a few errands or how much the items in your grocery cart will cost.

TERMS

Divisible: When one number can be divided by another and the result (quotient) is an exact whole number, we can say that number is divisible by the other number. For example, 36 is divisible by 9 because 36 ÷ 9 = 4.

Multiple: The product of a given number and any other whole number. For example, 5, 10, 15, 20, and 25 are all multiples of 5 because 5 can be multiplied by a whole number to equal each of these numbers.

© 2016, GREAT MINDS®