

Dear Family,

Throughout the next few weeks, our math class will be learning about decimal division. We will also be learning how to estimate decimal quotients.

You can expect to see homework that involves division of decimals through hundredths.

Here is a sample of how your child is taught to divide decimals.

## Vocabulary

**decimal** A number with one or more digits to the right of the decimal point

**dividend** The number that is to be divided in a division problem

**divisor** The number that divides the dividend

**quotient** The number that results from dividing



### MODEL Divide Decimals

Divide.  $44.8 \div 3.2$

#### STEP 1

Estimate.

$$45 \div 3 = 15$$

#### STEP 2

Make the divisor a whole number by multiplying the divisor and dividend by the same power of 10.

$$3.2 \overline{)44.8}$$

#### STEP 3

Divide.

$$\begin{array}{r} 14 \\ 32 \overline{)448} \\ \underline{-32} \phantom{0} \\ 128 \\ \underline{-128} \\ 0 \end{array}$$

So,  $44.8 \div 3.2 = 14$ .

### Tips

#### Estimating with Decimals

When estimating, it may be helpful to round the numbers in the problem to compatible numbers. Compatible numbers are pairs of numbers that are easy to compute with mentally.

For example, to estimate  $19.68 \div 4.1$ , use the compatible numbers 20 and 4:  $20 \div 4 = 5$ .

## Activity

Use trips to grocery or department stores as opportunities to practice decimal division. For example, "Which is the better buy, the 10-ounce box of cereal for \$3.25 or the 15-ounce box for \$4.65?" Work together to write a division sentence to represent each situation. Help your child estimate the quotient and then find the exact answer.

Name \_\_\_\_\_

**Division Patterns with Decimals**



**COMMON CORE STANDARD—5.NBT.2**  
*Understand the place value system.*

Complete the pattern.

1.  $78.3 \div 1 = \underline{78.3}$

$78.3 \div 10 = \underline{7.83}$

$78.3 \div 100 = \underline{0.783}$

2.  $179 \div 10^0 = \underline{\hspace{2cm}}$

$179 \div 10^1 = \underline{\hspace{2cm}}$

$179 \div 10^2 = \underline{\hspace{2cm}}$

$179 \div 10^3 = \underline{\hspace{2cm}}$

3.  $87.5 \div 10^0 = \underline{\hspace{2cm}}$

$87.5 \div 10^1 = \underline{\hspace{2cm}}$

$87.5 \div 10^2 = \underline{\hspace{2cm}}$

4.  $124 \div 1 = \underline{\hspace{2cm}}$

$124 \div 10 = \underline{\hspace{2cm}}$

$124 \div 100 = \underline{\hspace{2cm}}$

$124 \div 1,000 = \underline{\hspace{2cm}}$

5.  $18 \div 1 = \underline{\hspace{2cm}}$

$18 \div 10 = \underline{\hspace{2cm}}$

$18 \div 100 = \underline{\hspace{2cm}}$

$18 \div 1,000 = \underline{\hspace{2cm}}$

6.  $23 \div 10^0 = \underline{\hspace{2cm}}$

$23 \div 10^1 = \underline{\hspace{2cm}}$

$23 \div 10^2 = \underline{\hspace{2cm}}$

$23 \div 10^3 = \underline{\hspace{2cm}}$

7.  $51.8 \div 1 = \underline{\hspace{2cm}}$

$51.8 \div 10 = \underline{\hspace{2cm}}$

$51.8 \div 100 = \underline{\hspace{2cm}}$

8.  $49.3 \div 10^0 = \underline{\hspace{2cm}}$

$49.3 \div 10^1 = \underline{\hspace{2cm}}$

$49.3 \div 10^2 = \underline{\hspace{2cm}}$

9.  $32.4 \div 10^0 = \underline{\hspace{2cm}}$

$32.4 \div 10^1 = \underline{\hspace{2cm}}$

$32.4 \div 10^2 = \underline{\hspace{2cm}}$

**Problem Solving**



10. The local café uses 510 cups of mixed vegetables to make 1,000 quarts of beef barley soup. Each quart of soup contains the same amount of vegetables. How many cups of vegetables are in each quart of soup?

\_\_\_\_\_

11. The same café uses 18.5 cups of flour to make 100 servings of pancakes. How many cups of flour are in one serving of pancakes?

\_\_\_\_\_

Name \_\_\_\_\_

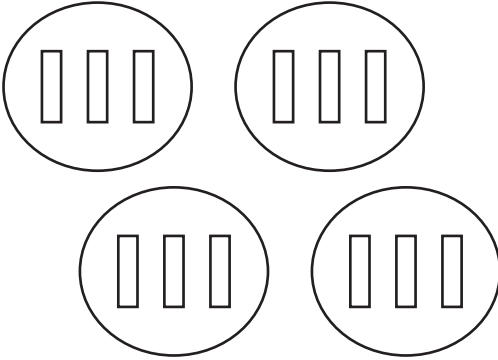
## Divide Decimals by Whole Numbers



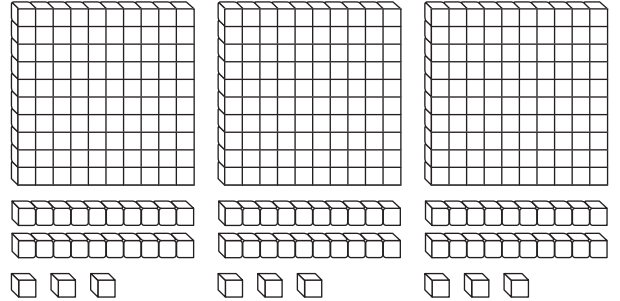
**COMMON CORE STANDARD—5.NBT.7**  
Perform operations with multi-digit whole numbers and with decimals to hundredths.

Use the model to complete the number sentence.

1.  $1.2 \div 4 = \underline{0.3}$



2.  $3.69 \div 3 = \underline{\hspace{2cm}}$



Divide. Use base-ten blocks.

3.  $4.9 \div 7 = \underline{\hspace{2cm}}$

4.  $3.6 \div 9 = \underline{\hspace{2cm}}$

5.  $2.4 \div 8 = \underline{\hspace{2cm}}$

6.  $6.48 \div 4 = \underline{\hspace{2cm}}$

7.  $3.01 \div 7 = \underline{\hspace{2cm}}$

8.  $4.26 \div 3 = \underline{\hspace{2cm}}$

### Problem Solving



9. In PE class, Carl runs a distance of 1.17 miles in 9 minutes. At that rate, how far does Carl run in one minute?

\_\_\_\_\_

10. Marianne spends \$9.45 on 5 greeting cards. Each card costs the same amount. What is the cost of one greeting card?

\_\_\_\_\_

Name \_\_\_\_\_

**Estimate Quotients****COMMON CORE STANDARD—5.NBT.7**  
*Perform operations with multi-digit whole numbers and with decimals to hundredths.***Use compatible numbers to estimate the quotient.**

1.  $19.7 \div 3$

$$18 \div 3 = 6$$

2.  $394.6 \div 9$

3.  $308.3 \div 15$

**Estimate the quotient.**

4.  $63.5 \div 5$

5.  $57.8 \div 81$

6.  $172.6 \div 39$

7.  $43.6 \div 8$

8.  $2.8 \div 6$

9.  $467.6 \div 8$

10.  $209.3 \div 48$

11.  $737.5 \div 9$

12.  $256.1 \div 82$

**Problem Solving**

13. Taylor uses 645.6 gallons of water in 7 days. Suppose he uses the same amount of water each day. About how much water does Taylor use each day?
- \_\_\_\_\_

14. On a road trip, Sandy drives 368.7 miles. Her car uses a total of 18 gallons of gas. About how many miles per gallon does Sandy's car get?
- \_\_\_\_\_

Name \_\_\_\_\_

**Division of Decimals by Whole Numbers****COMMON CORE STANDARDS—5.NBT.7***Perform operations with multi-digit whole numbers and with decimals to hundredths.***Divide.**

$$\begin{array}{r}
 1.32 \\
 7 \overline{)9.24} \\
 \underline{-7} \phantom{00} \\
 22 \\
 \underline{-21} \\
 14 \\
 \underline{-14} \\
 0
 \end{array}$$

2.  $6 \overline{)5.04}$

3.  $23 \overline{)85.1}$

4.  $36 \overline{)86.4}$

5.  $6 \overline{)\$6.48}$

6.  $8 \overline{)59.2}$

7.  $5 \overline{)2.35}$

8.  $41 \overline{)278.8}$

9.  $19 \overline{)\$70.49}$

10.  $4 \overline{)\$9.48}$

11.  $18 \overline{)82.8}$

12.  $37 \overline{)32.93}$

**Problem Solving**

13. On Saturday, 12 friends go ice skating. Altogether, they pay \$83.40 for admission. They share the cost equally. How much does each person pay?

\_\_\_\_\_

14. A team of 4 people participates in a 400-yard relay race. Each team member runs the same distance. The team completes the race in a total of 53.2 seconds. What is the average running time for each person?

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