Chapter 2

School-Home Letter

Dear Family,

During the next few weeks, our math class will be learning about dividing three- and four-digit whole numbers. We will also learn how to interpret remainders.

You can expect to see homework that provides practice with division of three- and four-digit dividends by one- and two-digit divisors.

Here is a sample of how your child will be taught to divide a three-digit number by a one-digit divisor.

Vocabulary

compatible numbers Numbers that are easy to compute with mentally

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

divisor The number that divides the dividend

quotient The number, not including the remainder, that results from dividing

remainder The amount left over when a number cannot be divided equally

MODEL Divide Three-Digit Numbers

This is how we will divide three-digit numbers.

Solve. $268 \div 5$

STEP 1

Estimate to place the first digit in the quotient.

$250 \div 5 = 50$

So, place the first digit in the tens place.

$$5\overline{)268}$$

STEP 2

Divide the tens.

$$\begin{array}{r} 5 \\ 5\overline{)268} \\ -25 \\ \hline 18 \end{array}$$

STEP 3

Divide the ones.

$$\begin{array}{r} 53\text{ r}3 \\ 5\overline{)268} \\ -25 \\ \hline 18 \\ -15 \\ \hline 3 \end{array}$$

Tips

Identifying Patterns in Division

When estimating to place the first digit, it is important to recognize patterns with multiples of 10, 100, and 1,000. Complete the division with basic facts, then attach the same number of zeros to the dividend and the quotient.

$36 \div 4 = 9$

so, $36{,}000 \div 4 = 9{,}000$.

Activity

Plan a vacation for the summer. Research the distance to the destination from your home. You can spend no more than one week traveling to the destination, and you must travel the same number of miles each day. Decide how many days you will spend traveling. Then find how many miles you need to travel each day.

Name _____

Place the First Digit

COMMON CORE STANDARD—5.NBT.6
Perform operations with multi-digit whole numbers and with decimals to hundredths.

Divide.

1. $4\overline{)388}$

$$\begin{array}{r} 97 \\ 4\overline{)388} \\ -36 \\ \hline 28 \\ -28 \\ \hline 0 \end{array}$$

2. $4\overline{)457}$

3. $8\overline{)712}$

4. $9\overline{)204}$

5. $2{,}117 \div 3$

6. $520 \div 8$

7. $1{,}812 \div 4$

8. $3{,}476 \div 6$

Problem Solving

9. The school theater department made $2,142 on ticket sales for the three nights of their play. The department sold the same number of tickets each night and each ticket cost $7. How many tickets did the theater department sell each night?

10. Andreus made $625 mowing yards. He worked for 5 consecutive days and earned the same amount of money each day. How much money did Andreus earn per day?

Name _____

Divide by 1-Digit Divisors

COMMON CORE STANDARD—5.NBT.6
Perform operations with multi-digit whole numbers and with decimals to hundredths.

Divide.

1. $4\overline{)724}$

2. $5\overline{)312}$

3. $278 \div 2$

4. $336 \div 7$

```
  181
4)724
 -4
  32
 -32
   04
  - 4
    0
```

181

_____ _____ _____ _____

Find the value of *n* in each equation. Write what *n* represents in the related division problem.

5. $n = 3 \times 45$

6. $643 = 4 \times 160 + n$

7. $n = 6 \times 35 + 4$

_____ _____ _____

Problem Solving Real World

8. Randy has 128 ounces of dog food. He feeds his dog 8 ounces of food each day. How many days will the dog food last?

_____

9. Angelina bought a 64-ounce can of lemonade mix. She uses 4 ounces of mix for each pitcher of lemonade. How many pitchers of lemonade can Angelina make from the can of mix?

_____

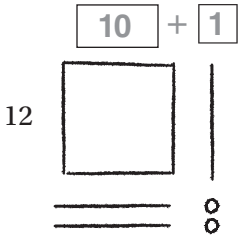
Name _____

Division with 2-Digit Divisors

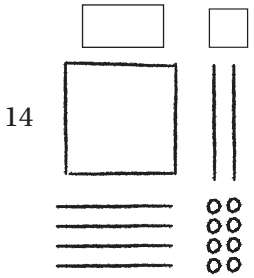
COMMON CORE STANDARD—5.NBT.6
Perform operations with multi-digit whole numbers and with decimals to hundredths.

Use the quick picture to divide.

1. $132 \div 12 =$ 11



2. $168 \div 14 =$ _____



Divide. Use base-ten blocks.

3. $195 \div 13 =$ _____

4. $143 \div 11 =$ _____

5. $165 \div 15 =$ _____

Divide. Draw a quick picture.

6. $192 \div 16 =$ _____

7. $169 \div 13 =$ _____

Problem Solving Real World

8. There are 182 seats in a theater. The seats are evenly divided into 13 rows. How many seats are in each row?

_____

9. There are 156 students at summer camp. The camp has 13 cabins. An equal number of students sleep in each cabin. How many students sleep in each cabin?

_____

Name _____

Partial Quotients

COMMON CORE STANDARD—5.NBT.6
Perform operations with multi-digit whole numbers and with decimals to hundredths.

Divide. Use partial quotients.

1. $18\overline{)236}$

$18\overline{)236}$

-180 ← 10×18 | 10

56

-36 ← 2×18 | 2

20

-18 ← 1×18 | $+ 1$

2 | 13

236 ÷ 18 is 13 r2.

2. $36\overline{)540}$

3. $27\overline{)624}$

4. 478 ÷ 16

5. 418 ÷ 22

6. 625 ÷ 25

7. 514 ÷ 28

8. 322 ÷ 14

9. 715 ÷ 25

Problem Solving Real World

10. A factory processes 1,560 ounces of olive oil per hour. The oil is packaged into 24-ounce bottles. How many bottles does the factory fill in one hour?

_____

11. A pond at a hotel holds 4,290 gallons of water. The groundskeeper drains the pond at a rate of 78 gallons of water per hour. How long will it take to drain the pond?

_____