Unit **7**

Family Letter

Reveal MATH®

Dear Family,

In this unit, Divide Whole Numbers, your child will learn to relate multiplication and division, estimate quotients, and divide 4-digit whole numbers by 2-digit whole numbers.

STEM Career Kid for this Unit

Hi, I'm Grace.

I want to be a computer programmer. I will use math in my job when I find how many pages are needed to hold all of the lines of computer code. I'll show students how I can divide whole numbers and interpret remainders.

What math terms will your child use?

Term	Student Understanding
quotient	The result of a division problem
compatible numbers	Used in estimating quotients; find numbers that are near the dividend and the divisor that make use of a basic fact
partial quotients	A method, or algorithm, for using multiplication to help find the quotient of two numbers

Math @ Home Activity

What can your child do at home?

Help your child develop fluency with the algorithm used to divide numbers. Students will learn that division is related to multiplication. Practice finding compatible numbers in order to estimate a quotient. Point out situations in which a remainder has to be interpreted. Have your child teach you how to use the partial quotients algorithm to divide.

What Will Students Learn in This Unit?

Use Compatible Numbers to Estimate a Quotient

Your child will learn how to use compatible numbers to estimate a quotient.

Estimate the quotient 2,978 ÷ 46.

2,978 is close to 3,000.
46 is close to 50.

A possible estimate is
3,000 ÷ 50 = 60.

So 2,978 ÷ 46 is about 60.

2,854 is close to 2,800.
46 is close to 40.

A possible estimate is
2,800 ÷ 40 = 70.

So 2,978 ÷ 46 is about 70.

Divide Multi-digit Whole Numbers

Your child will learn how to use the partial quotients algorithm to divide whole numbers.
Find the quotient 3,120 ÷ 65.

```
65)3,120
 −2,600 | 40
    520
   −325 |  5
    195
   − 195 |  3
      0  |
```

The factors used, shown along the side, add to be the quotient, 48.

So 3,120 ÷ 65 = 48.

Interpret Remainders in Division

Your child will learn how to interpret the remainder in the context of a problem in order to answer the question.

A shipping carton can hold up to 36 items. How many cartons are needed to ship 2,500 items?

To solve, find 2,500 ÷ 36.

```
36)2,500
 −2,160 | 60
    340
   − 180 |  5
    160
   − 144 |  4
     16  |
```

The division shows that the quotient is 69 and the remainder is 16.

So there will be 69 full cartons, and 1 more carton is needed for the extra 16 items.

70 cartons are needed to ship 2,500 items.