

FAMILY MATH

Division of Whole Numbers

Dear Family,

Your student is learning to find quotients of multi-digit dividends and divisors. Earlier in grade 4, they used a variety of methods to solve division problems with one-digit divisors. Now in grade 5, your student uses these familiar methods to divide by a two-digit divisor. They use area models to help them solve and understand the vertical form of division. They also use familiar estimation strategies that help them determine whether their answers make sense. Students solve word problems and explain the meaning of quotients and remainders, which is important later in grade 5 when they solve multi-step word problems.

Key Term
dividend

$$360 \div 40 = 9$$

↗ Dividend ↑ Divisor ↖ Quotient

$$\begin{array}{r} 9 \\ 40 \overline{) 360} \\ \underline{-360} \\ 0 \end{array}$$

$926 \div 23$

Area Model

	30	10
23	690	230

$$\begin{array}{r} 690 \\ + 230 \\ \hline 920 \end{array}$$

$926 - 920 = 6$

Quotient: 40
Remainder: 6

Vertical Form

$$\begin{array}{r} 10 \\ 30 \overline{) 926} \\ \underline{-690} \\ 236 \\ \underline{-230} \\ 6 \end{array}$$

Estimates:
 $\rightarrow 900 \div 30 = 30$
 $\rightarrow 230 \div 23 = 10$

Quotient: 40
Remainder: 6

The total, or number being divided, in a division problem is the dividend. The number of groups or the size of the group is the divisor. The answer to the division problem is the quotient.

Using an area model next to the vertical form of division helps students understand how the numbers relate to each other. Eventually students will rely on the vertical form as their primary method for solving division problems.

At-Home Activity

Division Situations

Look for opportunities to help your student divide with multi-digit numbers in everyday life. Depending on the situation, they can estimate to find the approximate quotient, use a written method to find the exact quotient, or both. Talk about what the quotients and the remainders mean, and how your student knows an answer makes sense.

- Find packages of paper towels or toilet paper at the store or in an advertisement that have 10 or more rolls in the package. Look for the total amount of square feet on the label. Ask your student to divide the total square feet by the number of rolls in the package to find how many square feet are in each roll.
- Research to find the amount of money people in different careers earn in a year. Ask your student to determine the amount of money each of their classmates would get if that quantity were shared equally among them.