

FAMILY MATH

Multiplication of Decimal Numbers

Dear Family,

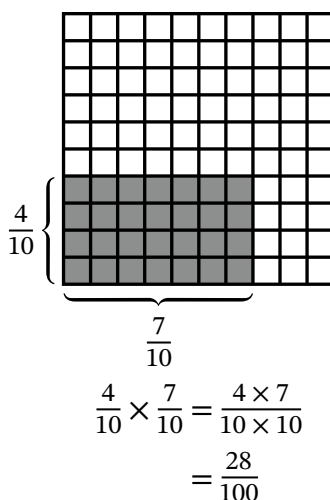
Your student is learning to multiply decimal numbers by using methods that are familiar from whole-number multiplication. Students multiply a decimal number by a one-digit whole number; by a multiple of 10, 100, or 1,000; by a two-digit whole number; and by another decimal number. To multiply, students use number lines, place value charts, area models, and vertical form. They relate decimal multiplication to fraction multiplication. Students use their experience multiplying whole numbers to select the most efficient strategy and determine the reasonableness of their answers, with a focus on the placement of the decimal point in the product.

	6 tenths	2 hundredths
7	42 tenths	14 hundredths
10	60 tenths	20 hundredths

$$4.2 + 6 + 0.14 + 0.20 = 10.54$$

$$0.62 \times 17 = 10.54$$

Area models can help students find all of the partial products.



When multiplying two decimal numbers, students can rename the numbers as fractions.

$$\begin{array}{r} 726 \text{ hundredths} \\ \times 15 \text{ tenths} \\ \hline 3630 \\ + 7260 \\ \hline 10,890 \text{ thousandths} \end{array}$$

Vertical form is an efficient way to multiply two decimal numbers.

At-Home Activities

Cost of Multiples

Help your student practice multiplying decimal numbers by whole numbers. Ask your student to calculate the cost of buying multiples of an item.

- If the cost of 1 box of crackers is \$3.27, calculate the cost of 3 boxes of crackers.
(3×3.27)
- If the cost of 1 pound of tomatoes is \$1.68, calculate the cost of 4 pounds of tomatoes.
(4×1.68)

Multiply Decimal Numbers

Help your student practice multiplying decimal numbers by decimal numbers. Cut a piece of paper into 9 strips, number the strips 1 to 9, and place the strips in a container. Have your student generate decimal numbers by picking a strip from the container, writing the number down, and putting the strip back. Then, repeat to create different decimal numbers. Focus on making decimal numbers that result in multiplying tenths by tenths and hundredths by tenths.

- If your student picks the numbers 3, 1, and 6, they could use decimal points to make decimal numbers, and then multiply: 0.31×0.6 , 3.1×0.6 , or 0.3×1.6 .