FAMILY MATH

Multiplication with Multiples of 10 and Further Application of Concepts

Module 3
Topic D

Dear Family,

Your student is learning how to multiply by multiples of 10 up to 90: 10, 20, 30, 40, 50, 60, 70, 80, and 90. They use what they know about place value and other strategies to break apart a multiple of 10 into two factors. They apply their multiplication skills to solve two-step word problems and to count more complex groups of objects. The strategies your student is learning now will support their understanding of multiplying with larger numbers.

$$4 \times 2 \text{ ones} = 8 \text{ ones}$$
$$4 \times 2 = 8$$

$$4 \times 2 \text{ tens} = 8 \text{ tens}$$
$$4 \times 20 = 80$$

Writing multiples of ten in unit form shows the connection between multiplying by ones and multiplying by tens.

$$\begin{aligned} 4 \times 20 &= 4 \times (2 \times 10) \\ &= (4 \times 2) \times 10 \\ &= 8 \times 10 \\ &= 80 \end{aligned}$$

Breaking apart a multiple of 10 into a number times 10 allows for multiplying smaller, known facts first.

At-Home Activities

Multiplying by Tens

Look for items that come packaged in multiples of 10. Encourage your student to use the items to practice multiplying by multiples of 10.

- "One package of pencils comes with 40 pencils. How many pencils would be in 7 packages?"
- "There are 8 bags of oranges on that shelf. Each bag holds about 20 oranges. About how many oranges are on the shelf?"
- "This shoe rack holds 30 shoes. How many shoes will 3 shoe racks hold?"

Tens of Cents

Help your student count a collection of coins. Provide an assortment of nickels, dimes, and quarters, or write 5¢, 10¢, and 25¢ on small pieces of paper to represent coins. Have your student put the coins into groups that have the same value. For example, if the value is 30¢, groups could be made from 3 dimes, 6 nickels, or 1 quarter and 1 nickel. Then ask your student to skip-count or multiply to find the total value of all the coins. Their count may sound like, "3 tens, 6 tens, 9 tens, 12 tens" or "30 cents, 60 cents, 90 cents, 120 cents."

As a challenge, suggest they break the coins into two types of groups, each with a different value. For example, they could organize all the dimes into groups of 20¢ and all the nickels and quarters in groups of 30¢. Then have them find the value of the coins in each type of group and add to find the total value of all the coins.