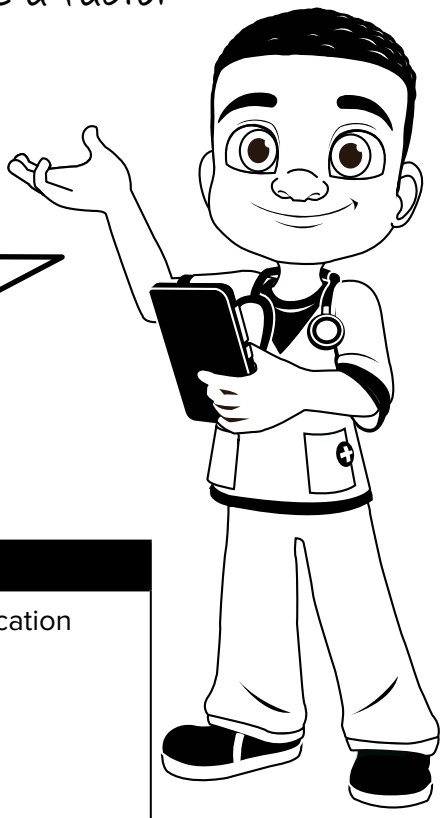
Unit **5**

Family Letter

Reveal MATH®

Dear Family,

In this Unit, Use Properties to Multiply by 3, 4, 6, 7, 8, and 9, your child will use arrays to decompose a factor to help recall a product.

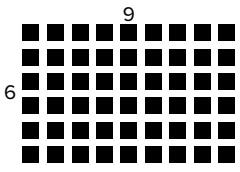


STEM Career Kid for this Unit

Hi, I'm Noah.

I want to be a nurse. I will use multiplication in my job when I give patients medicine. I'll show students how I will use multiplication facts in my work.

What math terms will your child use?

Term	Student Understanding
array	row of equal groups; arrays can represent multiplication problems. 
decompose	Break apart one factor before multiplying factors in a multiplication equation; For example, in the equation $6 \times 9 = ?$, the number 6 can be decomposed into $5 + 1$ and multiplied like this: $5 \times 9 + 1 \times 9 = 45 + 9 = 54$
factor	a number that is multiplied by another number to obtain a product; For example, in the equation $6 \times 9 = 54$, the numbers 6 and 9 are factors.
product	the result of multiplying two or more numbers; For example, in the equation $6 \times 9 = 54$, the number 54 is the product.

What can your child do at home?

Math @ Home Activity

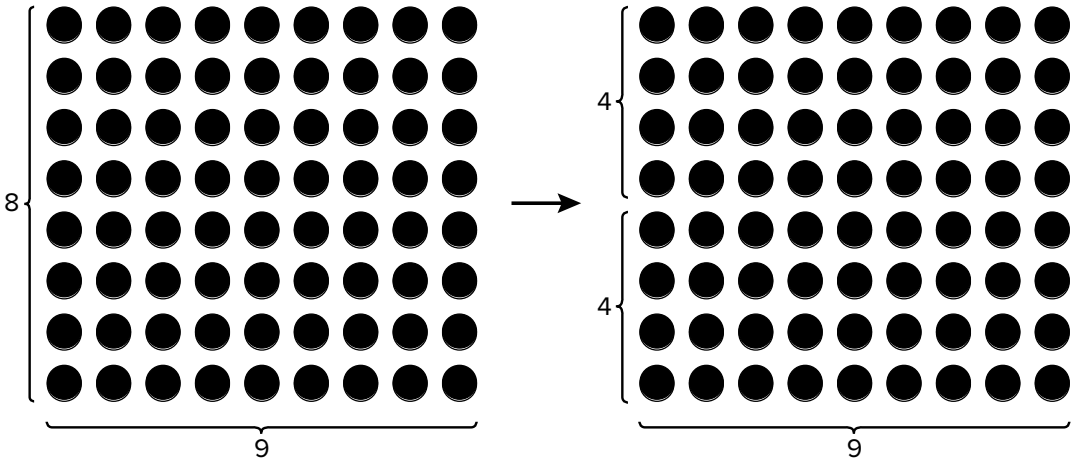
Help your child develop strategies for recalling multiplication facts. Use index cards to make two sets of number cards from 3 to 9 and place them facedown. Have your child pick 2 cards to use as factors. Then find the product by using two different ways to decompose.

What Will Students Learn in This Unit?

Decomposing Factors to Multiply

Your child will practice decomposing, or breaking apart, one of the factors in a multiplication problem into more manageable numbers. Students use arrays to visualize the problems. For example, 8 × 9 can be decomposed in the following way.

The arrays show 8 × 9 = 4 × 9 + 4 × 9 = 36 + 36 = 72.



Decompose a Factor Using 2s Facts

Your child will practice decomposing a multiplication problem and finding the product using 2s facts. For example, when multiplying 3 × 6 your child can decompose the factor 3 into 2 + 1. Then multiply: 2 × 6 = 12 and 1 × 6 = 6. Next, add the products of the two equations: 12 + 6 = 18. So, 3 × 6 = 18.

Decompose and Double to Find a Product

Your child will practice decomposing a factor and doubling the product to make finding the product more manageable. For example, 4 × 8 can be decomposed using doubles as follows.

- The factor 4 can be decomposed into 2 + 2. Then, multiply: 2 × 8 = 16. Now, double the product 16 to get 32.
- The factor 8 can be decomposed into 4 + 4. Then, multiply: 4 × 4 = 16. Now, double the product 16 to get 32.

Decompose a Factor Using 5s Facts

Your child will practice decomposing a multiplication problem and finding the product using 5s facts. For example, 9 × 6 can be decomposed using 5s facts as follows.

- The factor 9 can be decomposed into 5 + 4. Then, multiply: 5 × 6 = 30 and 4 × 6 = 24. Add the products 30 + 24 to get 54. So, 9 × 6 = 54.
- The factor 6 can be decomposed into 5 + 1. Then, multiply: 9 × 5 = 45 and 1 × 9 = 9. Add the products 45 + 9 to get 54. So, 9 × 6 = 54.