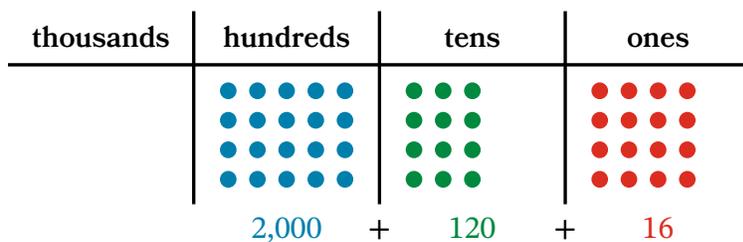


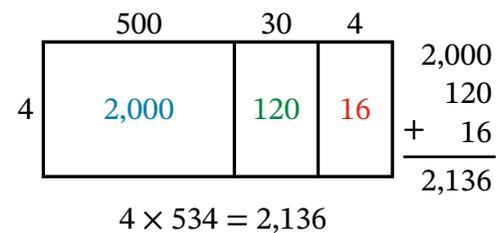
Multiplication of up to Four-Digit Numbers by One-Digit Numbers

Dear Family,

Earlier this year, your student learned to multiply two-digit numbers by one-digit numbers. Now, your student is building on that learning by multiplying three- and four-digit numbers by one-digit numbers. They use place value charts and area models to multiply by 1 place value at a time. They learn that the product of each smaller multiplication problem is called a partial product. To find the final product, they add all the partial products. Your student practices multiplying on a place value chart and by drawing an area model to prepare them for multiplying with vertical form. They see that the final product is the same no matter which method they use to multiply.

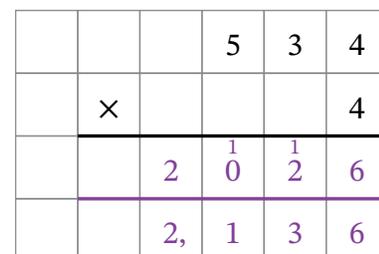
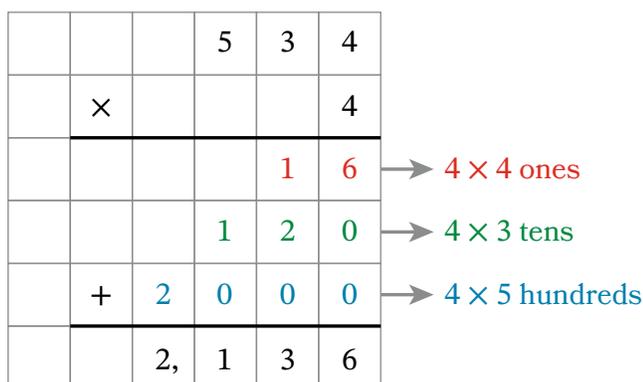


$$\begin{aligned}
 4 \times 534 &= 4 \times (5 \text{ hundreds} + 3 \text{ tens} + 4 \text{ ones}) \\
 &= 4 \times (500 + 30 + 4) \\
 &= (4 \times 500) + (4 \times 30) + (4 \times 4) \\
 &= 2,000 + 120 + 16 \\
 &= 2,136
 \end{aligned}$$



Students use place value charts to help them multiply and write equations to describe their work.

Students draw area models to help them multiply. The side lengths are the factors being multiplied and the areas are the partial products.



When first multiplying with vertical form, students record each partial product on a separate line. They transition to recording all of the partial products on one line.

At-Home Activity

Time to Multiply!

Have your student look at a clock and write the time as a three- or four-digit number. For example, if the time is 5:28, then write the number as 528. If the time is 10:13, then write the number as 1,013. Once your student has found their number, ask them to multiply it by another number based on the time of day. If the time is a.m., have them multiply by either 2, 3, 4, or 5. If the time is p.m., have them multiply by either 6, 7, 8, or 9. Your student can repeat this activity at different times of the day for extra practice. Encourage them to use a different method each time to multiply.