U.S. traditional multiplication (standard) is familiar to most adults and many children. A person using this algorithm multiplies from right to left, regrouping as necessary.

The traditional method for teaching this algorithm is to begin with models (such as base-10 blocks), using them to demonstrate the regrouping process.

**Build Understanding**

Divide the class into small groups and distribute base-10 blocks to each group. Ask each group to use the least number of blocks to represent the number 26. (They should show 2 tens and 6 ones.) Then write the problem 26 × 2 on the board, and ask the groups to model the problem, using the least number of blocks to show the product. Check to see how many students traded 10 ones for 1 ten, which would give them a total of 5 tens and 2 ones.

Using page 47, explain that with this method of multiplying, students will begin multiplying the ones digits. Use questions like the following to guide students through the example:

- Why does the first step of the model have 3 sets of blocks with 2 tens and 7 ones in each? (because the top factor, 27, has 2 tens and 7 ones, —and we're multiplying those 2 tens and 7 ones 3 times)
- Why are the 21 ones grouped together in the first step of the model? (to show that we multiply the ones digits first)
- In the second step of the model, why have the 21 ones been replaced by 2 tens and 1 one? (to show the renaming, or regrouping, that is taking place)

**Error Alert** Watch for students who misalign the products under the factors. If it helps students, allow them to draw vertical lines between the place-value columns, and show them how to extend the lines below the problem so that the lines will help guide them as they record the answer.

**Check Understanding**

Divide the class into pairs, designating a “writer” and a “solver” within each partnership. Give partners problems to solve together. The “solver” should dictate the solution to the “writer.” You might use any of the following problems (and add some of your own as needed): 13 × 4; 85 × 2; 61 × 7; 11 × 5; 22 × 3; 49 × 6. Explain that the “writer” should challenge the “solver” whenever the “writer” thinks a direction is incorrect. Then have partners switch tasks and work through a second problem. When you are reasonably certain that most of your students understand the algorithm, assign the “Check Your Understanding” exercises at the bottom of page 47. (See answers in margin.)
U.S. Traditional Multiplication (Standard)

Use blocks to model the problem. Multiply from right to left. Then find the total.

Example

Multiply the ones. 
\( 3 \times 7 = 21 \text{ ones} \)

\[ \begin{array}{c} \text{27} \\ \times 3 \end{array} \]

Rename 21 ones as 
2 tens and 1 one.

\[ \begin{array}{c} \text{27} \\ \times 3 \\ \downarrow \\ \text{1} \end{array} \]

Multiply the tens. 
\( 3 \times 2 \text{ tens} = 6 \text{ tens} \)

\[ \begin{array}{c} \text{27} \\ \times 3 \\ \downarrow \\ \text{1} \end{array} \]

Add the remaining tens. 
\( 6 \text{ tens} + 2 \text{ tens} = 8 \text{ tens} \)

\[ \begin{array}{c} \text{27} \\ \times 3 \\ \downarrow \\ \text{81} \end{array} \]

The product of 3 and 27 is 81.

Check Your Understanding

Solve the following problems.

1. \( 64 \times 3 \)
2. \( 56 \times 8 \)
3. \( 97 \times 5 \)
4. \( 505 \times 3 \)
5. \( 291 \times 4 \)
6. \( 137 \times 49 \)
7. \( 816 \times 4 \)
8. \( 495 \times 3 \)

Write your answers on a separate sheet of paper.