

Multiplication of a 3-Digit Number by a 2-Digit Number with Carrying

• Example 1

Multiply 56×673 .

Step 1
$$\begin{array}{r} 673 \\ \times 56 \\ \hline \end{array}$$
 Write the product as shown.

Step 2
$$\begin{array}{r} 41 \\ 673 \\ \times 56 \\ \hline 4038 \end{array}$$
 Multiply 6×673 for the first partial product. We must carry to the tens and hundreds columns.

Note: This places 5 below 3, the *tens* digit of the first partial product.

Step 3
$$\begin{array}{r} 31 \\ 41 \\ 673 \\ \times 56 \\ \hline 4038 \\ 3365 \end{array}$$
 Multiply 5 tens $\times 673$ for the second partial product. We shift the product one place left to show the multiplication by 5 tens.

Step 4
$$\begin{array}{r} 31 \\ 41 \\ 673 \\ \times 56 \\ \hline 4038 \\ 3365 \\ \hline 37,688 \end{array}$$
 We now add the partial products for our result.

In practice these steps are combined, and your work should look like that shown in step 4.

● ● ● CHECK YOURSELF 1

Multiply.

$$74 \times 538$$

● ● ● CHECK YOURSELF ANSWER

1. 39,812.

1.22 Exercises

Name _____

Section _____

Date _____

A N S W E R S

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____

Multiply.

$$\begin{array}{r} 1. \quad 235 \\ \times 49 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad 327 \\ \times 59 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 587 \\ \times 47 \\ \hline \end{array}$$

4. Find the product of 708 and 29. 5. What is the product of 21 and 551?

Solve the following applications.

6. **Sales.** A college purchased 28 computers for a new laboratory at a cost of \$879 per computer. What was the total cost of the order?
7. **Copying.** A ream of paper consists of 500 sheets. If 29 reams of paper were used in a copy machine during 1 week, how many copies were made?
8. **Salary.** Margaret has a job that pays \$356 per week. What will she earn in 1 year? (Use 52 weeks per year.)
9. **Medicine.** A hospital has 46 bottles of aspirin and each bottle contains 275 tablets. How many tablets does the hospital have in all?
10. **Assembly cost.** A company pays its shop workers \$15 for every assembly. How much would be paid to a person who had 104 assemblies?
11. **Cost.** A school purchases 18 television sets for \$369 each. What is the cost of the order?
12. **Time.** How many hours are there in a 365-day year?
13. **Salary.** Shannon worked as a medical transcriptionist. She earned \$426 per week for 16 weeks. What was the total amount she earned?
14. **Baking.** Barry's Pretzels makes 276 soft pretzels per day. How many pretzels did Barry's make in September?
15. **Library Books.** Each of 16 classrooms in a school contains 250 books in its reference library. What is the total number of books in the reference libraries?