

3-4 Multiplying up to 6-Digit Numbers

pages 47-48

1 Getting Started

Objective

- To multiply whole numbers or money by 1-digit factors

Materials

index cards

Warm Up • Mental Math

Have students tell how many minutes are in each period of time.

- 3 hours (180 min)
- 5 hours (300 min)
- 9 hours (540 min)
- 4 hours (240 min)
- $2\frac{1}{2}$ hours (150 min)
- 8 hours (480 min)
- $1\frac{1}{2}$ hours (90 min)
- 12 hours (720 min)

Warm Up • Pencil and Paper

Have students find each product.

- 7×246 (1,722)
- 6×158 (948)
- 9×328 (2,952)
- 4×677 (2,708)
- 8×539 (4,312)
- 3×987 (2,961)

2 Teach

Introduce the Lesson Have students read the problem and identify the questions being asked. (the number of raffle tickets sold and the cost of each book of tickets) Ask students to identify the known facts. (The students sold 3,416 raffle books; there are 6 tickets in each book; and each ticket costs \$2.35.) As students read aloud with you to solve the problem, explain that there are two separate operations necessary. Remind students to include the dollar sign and decimal point in their answer.

Name _____

Lesson 3-4

Multiplying up to 6-Digit Numbers

The students at Hamilton High School sold 3,416 raffle ticket books to raise money for band instruments. Each ticket cost \$2.35, and there are 6 tickets in each book. How many raffle tickets were sold? How much did each book cost?



We want to know the number of raffle tickets sold altogether. We know the students sold 3,416 books; there are 6 tickets in each book, and each ticket costs \$2.35.

To find the total number of tickets, we multiply the number of tickets in each book by the number of books. We multiply 3,416 by 6.

Multiply the ones.

$$\begin{array}{r} 3,416 \\ \times 6 \\ \hline \end{array}$$

Multiply the tens.

$$\begin{array}{r} 3,416 \\ \times 6 \\ \hline \end{array}$$

Multiply the hundreds.

$$\begin{array}{r} 3,416 \\ \times 6 \\ \hline \end{array}$$

Multiply the thousands.

$$\begin{array}{r} 3,416 \\ \times 6 \\ \hline \end{array}$$

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The students sold 20,496 raffle tickets.

To find the total cost of one book, we multiply the cost of one ticket by the number of tickets in the book.

We multiply \$2.35 by 6.

Multiply money the same way you multiply whole numbers. Remember to place the dollar sign and decimal point in the product.

$$\begin{array}{r} \$2.35 \\ \times 6 \\ \hline \$14.10 \end{array}$$

Each book of tickets costs \$14.10.

Getting Started

Multiply.

$$\begin{array}{r} 1. \quad 99.27 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad \$567.25 \\ \times 4 \\ \hline \end{array}$$

Copy and multiply.

$$3. \quad 9 \times 592,403$$

$$4. \quad 6 \times \$19.56$$

Lesson 3-4 • Multiplying up to 6-Digit Numbers

47

Develop Skills and Concepts Explain to students that in the model they were multiplying to the thousands place, renaming as they have been doing. Explain that multiplying money is just like multiplying whole numbers with the inclusion of the dollar sign and decimal (cents) point in the product. Have students work the following problems at the board:

- $\begin{array}{r} 7,364 \\ \times 5 \\ \hline \end{array}$ (36,820)
- $\begin{array}{r} \$4.85 \\ \times 7 \\ \hline \end{array}$ (\$33.95)
- $\begin{array}{r} \$35.07 \\ \times 6 \\ \hline \end{array}$ (\$210.42)
- $\begin{array}{r} 4,291 \\ \times 8 \\ \hline \end{array}$ (34,328)

3 Practice

Have students complete all the exercises. Remind students to align the dollars and cents when necessary.