



SKILL 15: Multiplication with Renaming

You can use renaming to combine steps when you multiply whole numbers.

Example

Multiply: 537×4 .

Multiply the ones.

$$4 \times 7 = 28$$

$$28 = 2 \text{ tens} = 8 \text{ ones}$$

$$\begin{array}{r} 2 \\ 537 \\ \times 4 \\ \hline 8 \end{array}$$

Multiply the tens.

$$4 \times 3 \text{ tens} = 12 \text{ tens}$$

Add the 2 extra tens:

$$12 \text{ tens} + 2 \text{ tens} = 14 \text{ tens}$$

$$14 \text{ tens} = 1 \text{ hundred} + 4 \text{ tens}$$

$$\begin{array}{r} 12 \\ 537 \\ \times 4 \\ \hline 48 \end{array}$$

Multiply the hundreds.

$$4 \times 5 \text{ hundreds} = 20 \text{ hundreds}$$

Add the extra hundred:

$$20 \text{ hundreds} + 1 \text{ hundred} =$$

$$21 \text{ hundreds}$$

$$\begin{array}{r} 12 \\ 537 \\ \times 4 \\ \hline 2,148 \end{array}$$

Estimate to check that your answer is reasonable: $500 \times 4 = 2,000$.

The product is reasonable. So, $537 \times 4 = 2,148$.

Guided Practice

Find each product.

1.
$$\begin{array}{r} 4 \\ 38 \\ \times 5 \\ \hline \square\square0 \end{array}$$
 $5 \times 8 = 40$
 $40 = 4 \text{ tens} + 0 \text{ ones}$
 $5 \times 3 \text{ tens} = 15 \text{ tens}$
 $15 \text{ tens} + 4 \text{ tens} = \underline{\hspace{1cm}} \text{ tens}$

2.
$$\begin{array}{r} \square \\ 67 \\ \times 8 \\ \hline \square\square6 \end{array}$$
 $8 \times 7 = 56$
 $56 = 5 \text{ tens} + 6 \text{ ones}$
 $8 \times 6 \text{ tens} = 48 \text{ tens}$
 $48 \text{ tens} + \underline{\hspace{1cm}} \text{ tens} = \underline{\hspace{1cm}} \text{ tens}$

3.
$$\begin{array}{r} \square \\ 93 \\ \times 4 \\ \hline \end{array}$$

4.
$$\begin{array}{r} \square\square \\ 356 \\ \times 6 \\ \hline \end{array}$$

5.
$$\begin{array}{r} \square\square \\ 283 \\ \times 5 \\ \hline \end{array}$$

6.
$$\begin{array}{r} \square\square \\ 2,317 \\ \times 4 \\ \hline \end{array}$$

7.
$$\begin{array}{r} \square \\ 58 \\ \times 7 \\ \hline \end{array}$$

8.
$$\begin{array}{r} \square \\ 809 \\ \times 8 \\ \hline \end{array}$$

9.
$$\begin{array}{r} \square \\ 661 \\ \times 3 \\ \hline \end{array}$$

10.
$$\begin{array}{r} \square \\ 8,702 \\ \times 2 \\ \hline \end{array}$$

SKILL 15: Practice

Find each product.

1.
$$\begin{array}{r} 68 \\ \times 9 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 524 \\ \times 7 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 98 \\ \times 4 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 457 \\ \times 6 \\ \hline \end{array}$$

5.
$$\begin{array}{r} 85 \\ \times 7 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 512 \\ \times 3 \\ \hline \end{array}$$

7.
$$\begin{array}{r} 305 \\ \times 9 \\ \hline \end{array}$$

8.
$$\begin{array}{r} 758 \\ \times 5 \\ \hline \end{array}$$

9.
$$\begin{array}{r} 453 \\ \times 8 \\ \hline \end{array}$$

10.
$$\begin{array}{r} 64 \\ \times 8 \\ \hline \end{array}$$

11.
$$\begin{array}{r} 315 \\ \times 4 \\ \hline \end{array}$$

12.
$$\begin{array}{r} 657 \\ \times 9 \\ \hline \end{array}$$

13.
$$\begin{array}{r} 1,568 \\ \times 6 \\ \hline \end{array}$$

14.
$$\begin{array}{r} 2,305 \\ \times 4 \\ \hline \end{array}$$

15.
$$\begin{array}{r} 4,861 \\ \times 8 \\ \hline \end{array}$$

16.
$$\begin{array}{r} 5,423 \\ \times 7 \\ \hline \end{array}$$

17.
$$\begin{array}{r} 16,093 \\ \times 4 \\ \hline \end{array}$$

18.
$$\begin{array}{r} 24,136 \\ \times 9 \\ \hline \end{array}$$

19.
$$\begin{array}{r} 10,208 \\ \times 6 \\ \hline \end{array}$$

20.
$$\begin{array}{r} 32,156 \\ \times 5 \\ \hline \end{array}$$

Solve.

21. Eric needs 4 new tires for his car. The tires he wants cost \$87 each. How much will Eric have to spend for tires? _____

22. The track is 440 feet long. Renzo ran around the track 9 times. How far did Renzo run? _____

23. Find the product: 952×7 .

Skill 15

A 1,729

C 6,654

B 6,354

D 6,664

24. What is 10,100,000 in word form?

Skill 1

F ten million one hundred thousand

G ten million one thousand

H ten million one hundred

J ten thousand one hundred