

## Unit 3: Multiplication of Whole Numbers

### Chapter 6: Multiply up to 5-digit numbers by a 1-digit number

$$\begin{array}{r} 47 \\ \times 3 \\ \hline 21 \\ +120 \\ \hline 141 \end{array}$$

Step 1: Multiply in the ones place

$$7 \times 3 = 21$$

Record the partial product below

Step 2: Multiply in the tens place

$$4 \text{ tens} = 40 \quad 40 \times 3 = 120$$

Record the partial product below

Step 3: Add the partial products to find the total product

$$\begin{array}{r} 372 \\ \times 5 \\ \hline 10 \\ + 350 \\ + 1500 \\ \hline 1860 \end{array}$$

Step 1: Multiply in the ones place

$$2 \times 5 = 10$$

Record the partial product below

Step 2: Multiply in the tens place

$$7 \text{ tens} = 70 \quad 70 \times 5 = 350$$

Record the partial product below

Step 3: Multiply in the hundreds place

$$3 \text{ hundreds} = 300 \quad 300 \times 5 = 1,500$$

Step 4: Add the partial products to find the total product

$$\begin{array}{r} 6816 \\ \times 4 \\ \hline 24 \\ + 40 \\ + 3200 \\ + 24000 \\ \hline 27264 \end{array}$$

Step 1: Multiply in the ones place

$$6 \times 4 = 24$$

Record the partial product below

Step 2: Multiply in the tens place

$$1 \text{ ten} = 10 \quad 10 \times 4 = 40$$

Record the partial product below

Step 3: Multiply in the hundreds place

$$8 \text{ hundreds} = 800 \quad 800 \times 4 = 3,200$$

Step 4: Multiply in the thousands place

$$6 \text{ thousands} = 6,000 \quad 6,000 \times 4 = 24,000$$

Step 5: Add the partial products to find the total product

$$\begin{array}{r}
 25329 \\
 \times \quad 6 \\
 \hline
 54 \\
 + \quad 120 \\
 + \quad 1800 \\
 + \quad 30000 \\
 + \quad 120000 \\
 \hline
 151,974
 \end{array}$$

Step 1: Multiply in the ones place

$$9 \times 6 = 54$$

Record the partial product below

Step 2: Multiply in the tens place

$$2 \text{ tens} = 20 \quad 20 \times 6 = 120$$

Record the partial product below

Step 3: Multiply in the hundreds place

$$3 \text{ hundreds} = 300 \quad 300 \times 6 = 1,800$$

Step 4: Multiply in the thousands place

$$5 \text{ thousands} = 5,000 \quad 5,000 \times 6 = 30,000$$

Step 5: Multiply in the ten-thousands place

$$2 \text{ ten thousands} = 20,000 \quad 20,000 \times 6 = 120,000$$

Step 6: Add the partial products to find the total product

$$\begin{array}{r}
 \$2.83 \\
 \times \quad 5 \\
 \hline
 15 \\
 + \quad 400 \\
 + \quad 1000 \\
 \hline
 1415 \\
 \$14.15
 \end{array}$$

Step 1: Multiply in the ones place

$$3 \times 5 = 15$$

Record the partial product below

Step 2: Multiply in the tens place

$$8 \text{ tens} = 80 \quad 80 \times 5 = 400$$

Record the partial product below

Step 3: Multiply in the hundreds place

$$3 \text{ hundreds} = 300 \quad 300 \times 5 = 1,500$$

Step 4: Add the partial products to find the total product

Step 5: Add in the dollar sign and decimal point

Reminders:

- ★ Make sure to carefully line up all place values
- ★ Remember that where a digit is located matters (place value)
- ★ Keep track of the number of zeroes needed for each place value
- ★ Add partial products carefully
- ★ Remember that the number of digits in the first factor tells how many partial products there will be to add ( ex: 4 digit factor = 4 partial products)
- ★ When multiplying money amounts, the steps are the same, just add the decimal/dollar sign to the answer at the end