

## Lesson 24: Multiplication with Decimals

**Purpose of Lesson:** You will learn what to do with decimals in multiplication problems.

When **multiplying** numbers with decimals is easy if you follow these steps:

- 1) Multiply as usual, **don't do anything with the decimal point, yet!**
- 2) When you are finished... **count the number of digits to the right of the decimal in the problem.**
- 3) Place the decimal in the answer part so it has as many places to the **right** of the decimal as in the problem.

**Let's take a look:**

a) 
$$\begin{array}{r} 4.2 \\ \times 3 \\ \hline 12.6 \end{array}$$
 **Note:** There is only one digit to the right of the decimal.  
**Then,** the answer will only have one digit to the right, as well!

b) 
$$\begin{array}{r} 1.21 \\ \times 4 \\ \hline 4.84 \end{array}$$
 This problem has two digits to the right.  
The answer has two places to the right of the decimal!

c) 
$$\begin{array}{r} .354 \\ \times 2 \\ \hline .708 \end{array}$$
 There are three digits to the right of the decimal.  
**The** answer has three digits to the right of the answer.

Now it's your turn to try some of these problems!

### Take Lesson 24 Quiz 1

#### Multiplication with Decimals – Continued

Some multiplication problems will have decimals in both numbers.

These are easy to solve if you remember the steps from the previous page.

- 1) Multiply first.
- 2) Then put the decimal in the answer by counting all of the places to the right of the decimal in the problem.

Here are some examples for you.

$$\begin{array}{r} \phantom{0}^1 \\ \text{d) } 2.3 \\ \times .4 \\ \hline .92 \end{array}$$

You probably noticed that there are decimals in two places in this problem.  
**Then there must be two places in the answer.**

$$\begin{array}{r} \text{e) } 3.17 \\ \times 1.4 \\ \hline 1268 \\ 317 \\ \hline 4.438 \end{array}$$

There are three decimal places in the problem.

**There are three decimal places in the answer.**

Try these problems!

### Take Lesson 24 Quiz 2

To multiply with money; keep the dollar sign, (\$) and decimal point, (.) in the product.

Examples:

$$\begin{array}{r} \phantom{0}^1 \phantom{0}^1 \\ \$73.03 \\ \times \phantom{0}6 \\ \hline \$438.18 \end{array} \quad \begin{array}{r} \phantom{0}^5 \phantom{0}^2 \phantom{0}^1 \\ \$87.42 \\ \times \phantom{0}7 \\ \hline \$611.94 \end{array}$$

### Take Lesson 24 Quiz 3