Identifying multiplication

When you first learned about multiplication, you most likely learned about the times symbol, $\times$. Now that you are getting into more advanced math, the traditional symbol $\times$ can often be confused with the variable x. Many textbooks will now be using parentheses or a dot instead of the times symbol.

Multiplication Symbols:

Times	$a \times b = c$
Dot	$a \cdot b = c$
Parentheses	$(a)(b) = c$
Variables next to each other	$ab = c$

The last way to indicate multiplication (without any multiplication symbol) is used only for multiplication of two or more variables (like ab or xyz) or for multiplication of a number by one or more variables (like $3x$ or $4ac$). If there are two numbers being multiplied, you must use a multiplication symbol.

Example

Write 5 times 2 in three different ways.

When we multiply 5 and 2 together, we can write that as

$$5 \times 2 = 10$$

$$5 \cdot 2 = 10$$

$$(5)(2) = 10$$

Let's try another example to identify multiplication.

Example

Simplify the expression.

$$2 \cdot 4 \times 3(5)(2 \cdot 2)$$

All of these symbols represent multiplication. Remember that multiplication can be done in any order.

$$8 \times 3(5)(2 \cdot 2)$$

$$8 \times 15(4)$$

$$8 \times 60$$

$$480$$
