Topic 3 L. 1: Writing and Expanding Multiplication Expressions

Warm-Up

The operation of multiplication can be written a few different ways. Write the four different ways we can represent the multiplication operation.

**Guided Practice**

By **combining like terms**, we write each expression using the fewest number of symbols and characters. Use math terms to describe the expressions and parts of the expression. This is called **standard form**.

1. $6×b$
2. $4∙3∙$ h
3. $2×2×2×a×b$
4. $5×m×3×p$
5. $1×g×w$

To expand multiplication expressions we will rewrite the expressions by including the “$ ∙ $” back into the expressions. . This is called expanded form.

1. $5g$
2. $7abc$
3. $12g$
4. $3h∙8$
5. $7g∙9h$
6. Find the product of $4f∙7g$.
7. Multiply $3de∙9yz$.
8. Double the product of $6y$ and $3bc$.

Homework

Lesson Summary

**An Expression in Expanded Form:** An expressionthat is written as sums (and/or differences) of products whose factors are numbers, variables, or variables raised to whole number powers is said to be in *expanded form*. A single number, variable, or a single product of numbers and/or variables is also considered to be in expanded form.

**AN EXPRESSION IN STANDARD FORM:** An expression that is in expanded form where all like-terms have been collected is said to be in *standard form.*

1. Rewrite the expression in standard form (use the fewest number of symbols and characters possible).
	1. $5∙y$
	2. $7∙d∙e$
	3. $5∙2∙2∙y∙z$
	4. $3∙3∙2∙5∙d $
2. Write the following expressions in expanded form.
	1. $3g$
	2. $11mp$
	3. $20yz$
	4. $15abc$
3. Find the product.
	1. $5d∙7g$
	2. $12ab∙3cd$