Topic 3 L.2: Distributing Expressions

Warm-Up

Opening Exercise

* 1. Create a model to show $2×5$.
	2. Create a model to show $2×b$, or $2b$.

**Guided Practice**

1. Write an expression that is equivalent to$2(a+b)$*.* What form is 2(a + b)?
2. Create a model to represent $(a+b)$.
3. The expression $2(a+b)$ tells us that we have $2$ of the $(a+b)$’s. Create a model that shows $2$ groups of $(a+b)$.
4. How many $a$’s and how many $b$’s do you see in the diagram?
5. How would the model look if we grouped together the $a$’s and then grouped together the $b$’s?
6. What expression could we write to represent the new diagram? What form is the expression written in?
7. Solve the expressions. Let $a=3$ and $b=4.$
8. Write two expressions that are equivalent to double$(3x+4y)$*.* To double means to
9. Are the expressions in factored form, expanded form, or neither?
10. Make a model to show 3x + 4y.
11. How can we change the model to show $2(3x+4y)$?
12. Are there terms that we can combine in this example? What are they?
13. What is an equivalent expression that we can use to represent $2(3x+4y)$?
14. Write an expression in factored form that is equivalent to the model below.

$$ 4x + 5$$

$$y$$

1. How can we rewrite this expression in expanded form?
2. Write an expression in expanded form that is equivalent to $3(7d+4e)$.

Independent Practice

Create a model for each expression below. Then write another equivalent expression using the distributive property.

1. $3(x+y)$

1. $4(2h+g)$

Apply the distributive property to write an equivalent expression in expanded form.

1. $8(h+3)$
2. $3(2h+7)$
3. $5(3x+9y)$
4. $4(11h+3g)$

$7k$ $12m$

$$j$$

1. $a(9b+13) $

Homework

1. Use the distributive property to write the following expressions in expanded form.
	1. $4(x+y)$
	2. $8(a+3b)$
	3. $3(2x+11y)$
	4. $9(7a+6b)$
	5. $c(3a+b)$
	6. $y(2x+11z)$
2. Create a model to show that $2(2x+3y)=4x+6y$.