

Lesson 6-8 • Group 2

Reinforce Understanding

6.8 Small Group • Group 2

I can use the commutative, associative, and identity properties to rewrite expressions, explain why the method works, and use it on a problem I have not seen before.

Worked model

Write an expression equivalent to $6(y + 3) + 9y$ in simplest form.

1. Distribute the 6 to each term inside. $6(y + 3) = 6y + 18$
2. Rewrite the whole expression. $6y + 18 + 9y$
3. Reorder so like terms sit together. $6y + 9y + 18$
4. Combine like terms. $15y + 18$

Answer: $6(y + 3) + 9y$ is equivalent to $15y + 18$.

Practice

Complete each exercise. Show the reasoning that supports your answer.

1. Match each equation with the property it demonstrates.

Write the name of the correct group on each line.

Groups: Commutative Associative Identity

- _____ $a + b = b + a$
- _____ $x \times 1 = x$
- _____ $(m + n) + p = m + (n + p)$
- _____ $c \times d = d \times c$
- _____ $y + 0 = y$
- _____ $(a \times b) \times c = a \times (b \times c)$

2. Match each equation to its property.

Write the letter of the matching item on each line.

1. _____ $7 + 9 = 9 + 7$
2. _____ $(2 \times 5) \times 3 = 2 \times (5 \times 3)$
3. _____ $15 \times 1 = 15$
4. _____ $0 + 23 = 23$
5. _____ $6 \times 4 = 4 \times 6$
6. _____ $(8 + 3) + 7 = 8 + (3 + 7)$

- ACommutative (Add)
- BAssociative (Mult)
- CIdentity (Mult)
- DIdentity (Add)
- ECommutative (Mult)
- FAssociative (Add)