

Lesson 6-8

Reinforce Understanding

Generate Equivalent Expressions

I can use the commutative, associative, and identity properties to rewrite expressions.

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. Sort each equation by the property it shows.

Write the name of the correct group on each line.

Groups: Commutative Associative Identity

- _____ $9 + 4 = 4 + 9$
- _____ $7 \times 1 = 7$
- _____ $(5 + 1) + 3 = 5 + (1 + 3)$

2. Which property is shown? $5 + 13 = 13 + 5$

Circle the letter of the best answer. Show how you know.

- A. Commutative Property
- B. Associative Property
- C. Identity Property
- D. Distributive Property

Show your work

3. Which property is shown? $(6 \times 3) \times 2 = 6 \times (3 \times 2)$

Circle the letter of the best answer. Show how you know.

- A. Commutative Property
- B. Identity Property
- C. Associative Property
- D. Distributive Property

Show your work
