

Lesson 3 Skills Practice

Properties of Operations

Name the property shown by each statement.

1. $9 \cdot 6 = 6 \cdot 9$

**Commutative Property
of Multiplication**

2. $m + 0 = m$

Additive Identity

3. $14 \cdot 1 = 14$

Multiplicative Identity

4. $2 + (8 + 3) = (2 + 8) + 3$

Associative Property of Addition

5. $x + y = y + x$

**Commutative Property
of Addition**

6. $(m + 2) + n = n + (m + 2)$

**Commutative Property
of Addition**

State whether the following conjectures are *true* or *false*. If *false*, provide a counterexample.

7. The sum of an even whole number and an odd whole number is always odd. **true**

8. Division of whole numbers is always commutative. **false; $8 \div 4 \neq 4 \div 8$**

Simplify each expression. Justify each step.

9. $5 + (b + 2)$

$5 + (b + 2) = 5 + (2 + b)$ **Commutative Property of Addition**
 $= (5 + 2) + b$ **Associative Property of Addition**
 $= 7 + b$ **Simplify.**

10. $8(2q)$

$8(2q) = (8 \cdot 2)q$ **Associative Property of Multiplication**
 $= 16q$ **Simplify.**

11. **RAIN** Piper recorded the amount of rain that fell for four nights in the table below. Use mental math to find the total amount of rain. Explain your reasoning.

Day	Monday	Tuesday	Wednesday	Thursday
Rain (in.)	2.6	1.5	1.4	2.5

8 in.; Sample answer: $2.6 + 1.4 = 4$ and $1.5 + 2.5 = 4$, $4 + 4 = 8$