Chapter 5 Expressions

Lesson 5-3 Properties of Operations Page 371

1 Name the property shown by the statement below.

$$16 + (c + 17) = (16 + c) + 17$$

The way in which the numbers are grouped is changed. So, The Associative Property of Addition is being used.

1 Simplify the expression $3x \cdot (7 \cdot x)$. Justify each step.

$$3x \bullet (7 \bullet x) = 3x \bullet (x \bullet 7)$$
 Commutative (×)
 $= (3x \bullet x) \bullet 7$ Associative (×)
 $= 3x^2 \bullet 7$ Simplify.
 $= 3 \bullet 7 \bullet x^2$ Commutative (×)
 $= (3 \bullet 7) \bullet x^2$ Associative (×)
 $= 21x^2$ Simplify.