

SECTION

1A

Ready to Go On? Skills Intervention**1-4 Properties of Numbers**

Many properties are helpful when performing mathematical operations. The **Commutative Property** states that you can add or multiply numbers in any order and get the same result. The **Associative Property** states that when you add or multiply, you can group numbers together in any order and get the same result. The **Identity Property** states that any number plus 0 is equal to that number and any number times 1 is equal to that number. The **Distributive Property** states that when multiplying, you can break a number into smaller numbers, multiply each number by the second number, and add the products.

Vocabulary

Commutative Property

Associative Property

Identity Property

Distributive Property

Using the Identity Property to Simplify Expressions

Simplify.

A. $73 + 0 = \underline{\hspace{2cm}}$

Any number plus 0 is equal to

 $\underline{\hspace{2cm}}$.

B. $45 \cdot 1 = \underline{\hspace{2cm}}$

Any number times 1 is equal to

 $\underline{\hspace{2cm}}$.**Using Properties to Simplify Expressions**

Simplify each expression using one or more of the properties.

A. $8 + 17 + 12 = 17 + 12 + 8$ is an example of the _____.

$= 17 + (12 + 8)$ is an example of the _____.

$= 17 + (\underline{\hspace{2cm}})$

$= \underline{\hspace{2cm}}$

B. $2 \cdot 14 \cdot 5 = 14 \cdot 2 \cdot 5$ is an example of the _____.

$= 14 \cdot (2 \cdot 5)$ is an example of the _____.

$= 14 \cdot (\underline{\hspace{2cm}})$

$= \underline{\hspace{2cm}}$

Using the Distributive Property to Multiply Mentally

Use the Distributive Property to find the product.

$6(22) = 6(\underline{\hspace{2cm}})$

$= (6 \cdot \underline{\hspace{2cm}}) + (6 \cdot \underline{\hspace{2cm}})$

$= \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$

$= \underline{\hspace{2cm}}$

Rewrite the number as two smaller parts.

Use the Distributive Property.

Multiply.

Add.