

2.16

Properties of Addition

• Example 1

One of the four properties of addition listed below is used to give an equivalent expression. Identify the property used.

Commutative property
Additive identity property
Additive inverse property
Associative property

(a) $8 + 9 = 9 + 8$

This uses the commutative property.

(b) $7 + (-7) = 0$

This uses the additive inverse property.

(c) $(8 + 9) + 3 = 8 + (9 + 3)$

This uses the associative property.

(d) $27 + 0 = 27$

This uses the additive identity property.

● ● ● CHECK YOURSELF 1

One of the four properties listed above is used to give an equivalent expression. Identify the property used.

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

b. $19 + 0 = 19$

● ● ● CHECK YOURSELF ANSWER

1. (a) associative property; (b) additive identity property.

2.16 Exercises

Name _____

Section _____

Date _____

A N S W E R S

1. _____

2. _____

3. _____

4. _____

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7. _____

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10. _____

11. _____

12. _____

Properties of Addition:

Commutative property
Additive identity property
Additive inverse property
Associative property

Identify the property used in each equation below.

1. $5 + 9 = 9 + 5$

2. $6 + 3 = 3 + 6$

3. $8 + 12 = 12 + 8$

4. $6 + 2 = 2 + 6$

5. $5 + (7 + 8) = (5 + 7) + 8$

6. $8 + (2 + 9) = (8 + 2) + 9$

7. $(10 + 5) + 9 = 10 + (5 + 9)$

8. $(5 + 5) + 3 = 5 + (5 + 3)$

9. $76 + 0 = 76$

10. $13 + (-13) = 0$

11. $0 + 23 = 23$

12. $-18 + 18 = 0$