

Addition Properties and Subtraction Rules

Addition Properties

Zero Property

$$12 + 0 = 12$$

When you add zero to a number, the sum is that number.

Commutative Property

$$23 + 45 = 68$$

$$45 + 23 = 68$$

When you change the order of the addends, the sum stays the same.

Associative Property

$$(6 + 7) + 15 = 28$$

$$6 + (7 + 15) = 28$$

When you change the way the addends are grouped, the sum stays the same.

The problem in parentheses is done first.

Subtraction Rules—Zeros in Subtraction

$$2 - 0 = 2$$

When you subtract zero from a number, the difference is that number.

$$4 - 4 = 0$$

When you subtract a number from itself, the difference is zero.

Complete each number sentence. Tell which property or rule you used.

1. $23 + 84 = \underline{\quad} + 23$

2. $76 + 0 = \underline{\quad}$

3. $11 + 24 = \underline{\quad} + 11$

4. $(5 + 3) + 3 = \underline{\quad} + (3 + 3)$

5. $125 - \underline{\quad} = 125$

6. $814 - 814 = \underline{\quad}$

7. $5 + (3 + 7) = (\underline{\quad} + 3) + 7$

