

Properties of Operations

Find each missing number. Tell what property or properties are shown.

1. $(32 + \underline{\hspace{2cm}}) + 2 + 7 = 32 + (14 + 2) + 7$

2. $8 + 6 + 12 = \underline{\hspace{2cm}} + 12 + 6$

3. $(8 \times \underline{\hspace{2cm}}) \times 7 = 8 \times (9 \times 7)$

4. $\underline{\hspace{2cm}} + 0 = 34$

5. $12 \times 3 = 3 \times \underline{\hspace{2cm}}$

6. $1 \times \underline{\hspace{2cm}} = 288$

7. **Reasoning** Write a number sentence that shows why the associative property does not work with subtraction.

8. Which property is shown in $(23 \times 5) \times 13 \times 7 = 23 \times (5 \times 13) \times 7$?

A Commutative Property of Multiplication

B Identity Property of Multiplication

C Associative Property of Multiplication

D Associative Property of Addition

9. **Writing to Explain** Explain why you do not have to do any computing to solve $15 \times 0 \times (13 + 7)$.
