

SOL Mini-Challenge

Equations and Inequalities

A.3

Read and solve.

1. Which property justifies the statement “If $3a + 3b = 12$, then $3(a + b) = 12$ ” ?
 - A. Commutative property of multiplication
 - B. Distributive property for multiplication over addition
 - C. Multiplicative identity property
 - D. Associative property of addition

SOL Mini-Challenge—continued

6. What is the solution to $-2x + 6 \geq 3x - 4$?

- F. $x \geq -2$
- G. $x \geq 2$
- H. $x \leq -2$
- J. $x \leq 2$

7. What is the solution to $2(-3x + 4) = 4(-2x + 6)$?

- A. -8
- B. -1
- C. 1
- D. 8

8. What is the solution to $2(4 - x) > 5x + 8$?

- F. $x < -8$
- G. $x < 0$
- H. $x > 0$
- J. $x > 8$

9. Which statement is *always* true?

- A. $4 + a = 4 \times a$
- B. $a + (-4 + 4) = a + 0$
- C. $a \div 4 = 4 \div a$
- D. $4 - a = a - 4$

10. If $A < B$, which of the following statements *cannot* be true?

- F. $A + C < B + C$
- G. $A - C < B - C$
- H. $AC < BC$
- J. $-A < -B$