

Algebra I EOC Practice #14

SPI 3102.3.5: Write and/or solve linear equations, inequalities, and compound inequalities including those containing absolute value.

1. Solve the equation $\frac{5m+6}{8} = 7$ for m .

- A. $m = 50$
- B. $m = 8$
- C. $m = 10$
- D. $m = 0$

2. Solve the equation $w - 4 = -12 - 3w$ for w .

- A. $w = -4$
- B. $w = -2$
- C. $w = -8$
- D. $w = 4$

3. Solve the equation $c - (-1.3) = -2.3$ for c .

- A. $c = -1.0$
- B. $c = 3.6$
- C. $c = 1.0$
- D. $c = -3.6$

4. Which number is a solution to $12x - 7 > 7x + 13$ or $4x + 5 > 7x + 35$?

- A. -12
- B. -10
- C. -4
- D. 4

5. Which compound inequality represents $|7 + 2n| \geq 19$?

- A. $7 + 2n \geq 19$ or $7 + 2n \geq -19$
- B. $7 + 2n \geq 19$ or $7 + 2n \leq -19$
- C. $-19 \leq 7 + 2n \leq 19$
- D. $7 + 2n \leq 19$ or $7 + 2n \geq -19$

6. Solve $4b - 3(2b - 6) > 3 - (5b + 9)$ for b .

- A. $b < 8$
- B. $b > 8$
- C. $b < -8$
- D. $b > -8$

7. Solve $8 > 5 - 3x$ and $5 - 3x > -13$ for x .

- A. $\{x/1 < x < 6\}$
- B. $\{x/-1 < x < -6\}$
- C. $\{x/-1 < x < 6\}$
- D. $\{x/1 < x < 6\}$

8. Solve $|x - 6| = 4$.

- A. $\{2, 10\}$
- B. $\{-2, 10\}$
- C. $\{-2, -10\}$
- D. $\{-2, 2\}$

9. Solve: $7x - 11 < 10 < 3x + 28$

- A. $x < 3$ or $x < 6$
- B. $-6 < x < 3$
- C. $x > 6$ and $x < 3$
- D. $-3 < x < 6$

10. Which statement represents the solution to this compound inequality?

$$-2x - 7 \geq 3 \text{ or } -4x + 6 \leq -18$$

- A. $x \leq 5$ or $x \leq -6$
- B. $x \geq -5$ or $x \leq 6$
- C. $x \leq -5$ or $x \geq 6$
- D. $x \leq 5$ or $x \geq -6$