

## Identifying Solutions

Multi-step: S1

Choose the correct solution that best describes each inequality.

1)  $21 \geq \frac{4x}{3} + x > -14$

- a)  $(-\infty, -6] \cap [9, \infty)$       b)  $(-6, 9]$   
 c)  $[-6, 9)$       d)  $(-\infty, -6) \cap (9, \infty)$

2)  $3(5x + 12) < -9$  or  $20 \leq 2(6 + 4x)$

- a)  $(-\infty, -3)$       b)  $[1, \infty)$   
 c)  $(-\infty, -3) \cup [1, \infty)$       d)  $(-\infty, -3] \cap (1, \infty)$

3)  $-15 \geq 5(-x - 8)$  and  $4x - 20 > 10$

- a)  $(-\infty, -5]$       b)  $(-\infty, -5)$   
 c)  $(-\infty, -5] \cup [8, \infty)$       d)  $(-9, -5)$

5)  $\frac{3x - 26}{7} > -8$  or  $6 \leq 4x - 10$

- a)  $(-\infty, -10] \cap (-4, \infty)$       b)  $(-\infty, 8)$   
 c)  $[-4, \infty)$       d)  $(-\infty, -14) \cup (8, \infty)$

7)  $-81 \geq 9(5x + 36)$  and  $4x - \frac{x}{3} < 22$

- a)  $(-\infty, -9] \cup (6, \infty)$       b)  $(-\infty, 6)$   
 c)  $(-\infty, -9) \cap [6, \infty)$       d)  $(-\infty, -9]$

8)  $1 \leq \frac{2x - 5}{-29}$  or  $\frac{x}{2} - \frac{x}{5} \geq -3$

- a)  $(-\infty, 10] \cup [12, \infty)$       b)  $(-\infty, -10] \cup (12, \infty)$   
 c)  $(-\infty, -12] \cup [-10, \infty)$       d)  $(-\infty, -12] \cup [10, \infty)$

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d)  $3(14 + 2x) > -42$

- b)  $(-\infty, 8)$   
 d)  $(-\infty, -14) \cup (8, \infty)$

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