

## Identifying Solutions

Two-step: S3

Choose the correct solution that best describes each inequality.

1)  $-10 + 3x < 8$  and  $\frac{x+4}{2} \leq -7$

- a)  $(-\infty, -18] \cup (6, \infty)$       b)  $(-\infty, 6)$   
 c)  $(-\infty, -18]$                       d)  $[-18, 6)$

2)  $4x - 23 \leq 5$  or  $-16 \geq 9x + 29$

- a)  $(-\infty, -7] \cap [5, \infty)$       b)  $(-\infty, -5]$   
 c)  $(-\infty, -5] \cup [7, \infty)$       d)  $(-\infty, 7]$

3)  $\frac{x}{6} + 11 < 9$  or  $8x + 40 > 24$

- a)  $(-\infty, 2) \cap (12, \infty)$       b)  $(-\infty, 2)$   
 c)  $(-12, -2)$                           d)  $(-12, 2)$

4)  $19 > 5x - 1 > -6$

- a)  $(-1, \infty)$   
 b)  $[-1, \infty)$   
 c)  $(-\infty, -1] \cap (4, \infty)$   
 d)  $(-\infty, -1] \cap (4, \infty)$

5)  $9 \geq 2x - 7$  and  $6x \leq x + 11$  or  $3x - 5 > 28$

- a)  $(-\infty, 8]$                               b)  $(-\infty, 8]$   
 c)  $(-\infty, 3] \cup [8, \infty)$               d)  $(-\infty, 3] \cup [8, \infty)$

- a)  $(-\infty, -7] \cup (11, \infty)$   
 b)  $(-\infty, -7] \cup (11, \infty)$   
 c)  $(-\infty, -7] \cup (11, \infty)$   
 d)  $(-\infty, -7] \cup (11, \infty)$

7)  $-38 < 18 + 7x \leq 4x$

- a)  $(-8, -6]$                               b)  $(-8, -6]$   
 c)  $(-\infty, -8) \cup (-6, \infty)$           d)  $[-8, -6)$

8)  $1 < \frac{x+19}{5}$

- a)  $(-\infty, -15) \cup (-14, \infty)$   
 b)  $(-\infty, -15) \cup (-14, \infty)$   
 c)  $(-14, 15)$   
 d)  $(-\infty, -15)$

9)  $\frac{x+6}{4} \geq -1$  and  $5x - 17 \geq 8$

- a)  $[-10, \infty)$                               b)  $(-\infty, -10] \cup [5, \infty)$   
 c)  $[-10, 5]$                                 d)  $[5, \infty)$

10)  $23 - 8x < -1$  or  $17 \geq 6x + 29$

- a)  $(-\infty, -2) \cup (3, \infty)$               b)  $(-\infty, -2] \cup (3, \infty)$   
 c)  $(-\infty, -2) \cup [3, \infty)$               d)  $(-\infty, -2] \cup [3, \infty)$

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- b)  $[-1, \infty)$   
 d)  $(-\infty, -1] \cap (4, \infty)$

5)  $9 \geq 2x - 7$  and  $6x \leq x + 25$  or  $3x - 5 > 28$

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