

## Identifying Solutions

Multi-step: S2

Choose the correct solution that best describes each inequality.

1)  $\frac{7x-5}{3} \geq 10$  or  $-4 > \frac{9x+19}{2}$

- a)  $(-\infty, 3) \cup [5, \infty)$       b)  $(-\infty, 3] \cup (5, \infty)$   
 c)  $(-\infty, -3] \cup (5, \infty)$       d)  $(-\infty, -3) \cup [5, \infty)$

2)  $5(3x-2) \leq 80$  and  $16 \geq 8(4x-14)$

- a)  $(-\infty, 6]$       b)  $(-\infty, 4]$   
 c)  $(-\infty, 4] \cup [6, \infty)$       d)  $(-\infty, 4] \cap [6, \infty)$

3)  $57 > -\frac{x}{4} + 5x$  or  $\frac{x}{4}$

- a)  $(-\infty, -16)$       b)  $(-\infty, -16) \cup (12, \infty)$   
 c)  $(-\infty, -16) \cup (12, \infty)$       d)  $(-\infty, -16) \cup (12, \infty)$

$7 < \frac{2x}{5} + x$

- a)  $(-\infty, 5) \cap [12, \infty)$   
 d)  $(5, 12)$

5)  $18 > \frac{4x}{5} + x \geq -18$

- a)  $(-\infty, -10) \cap (10, \infty)$       b)  $(-\infty, -10) \cap (10, \infty)$   
 c)  $(-\infty, -10) \cap [10, \infty)$       d)  $(-\infty, -10) \cap [10, \infty)$

or  $40 \leq 4(6x-14)$

- b)  $(-\infty, -15) \cup [4, \infty)$   
 d)  $(-\infty, -15]$

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7)  $4(7x+12) < 20$  and  $11 > \frac{x}{5} + 2x$

- a)  $(-\infty, -1) \cap (5, \infty)$       b)  $(-\infty, -1)$   
 c)  $(-\infty, 5)$       d)  $(-\infty, -1) \cup (5, \infty)$

8)  $-16 < \frac{x}{3} + \frac{x}{5} \leq -8$

- a)  $(-30, -15]$       b)  $(-\infty, -15] \cap [30, \infty)$   
 c)  $(-\infty, 15] \cap [30, \infty)$       d)  $(-\infty, -30] \cap (15, \infty)$

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