

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) $(-\infty, 5) \cap [12, \infty)$
 b) $(-\infty, 5) \cap [12, \infty)$
 c) $(-\infty, 5) \cap [12, \infty)$
 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 $40 \leq 4(6x-14)$

- a) $(-\infty, -15) \cup [4, \infty)$
 b) $(-\infty, -15) \cup [4, \infty)$
 c) $(-\infty, -15) \cup [4, \infty)$
 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) $(-\infty, -30] \cap (15, \infty)$