

Identifying Solutions

Two-step: S2

Choose the correct solution that best describes each inequality.

1) $2x \geq 18 + 4x > 5x$

- a) $(-\infty, -9] \cup (18, \infty)$ b) $(-\infty, -9] \cap (-\infty, 18)$
 c) $(-\infty, 18) \cap [9, \infty)$ d) $(-\infty, 9) \cup [18, \infty)$

2) $3 \leq 9x - 6 < 12$

- a) $[1, 2)$ b) $(-\infty, 1]$
 c) $(-\infty, 1) \cup [2, \infty)$ d) $(1, 2]$

3) $-7 + 5x \leq 13$ and $\frac{x+6}{4} < -2$

- a) $(-\infty, 4]$ b) $(-\infty, 4)$
 c) $(-14, 4]$ d) $(-14, 4)$

4) $8x - 4 > 12$ or $-15 \leq 6x + 3$

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

5) $\frac{x}{3} + 5 > 8$ or $4x + 23 < 9$

- a) $(-\infty, -2) \cap [9, \infty)$ b) $(-\infty, -2) \cup [9, \infty)$
 c) $(9, \infty)$ d) $(-\infty, -2) \cup (9, \infty)$

6) $-9 < \frac{x+13}{2}$

- a) $(-31, -5)$ b) $(-31, -5)$
 c) $(-\infty, -31) \cap (5, \infty)$ d) $(-\infty, -31) \cup (5, \infty)$

7) $\frac{x+7}{2} \geq -6$ and $4x - 19 < 39$

- a) $[-19, \infty)$ b) $(-\infty, -19] \cup [6, \infty)$
 c) $(-\infty, -6] \cap [19, \infty)$ d) $(-\infty, -19] \cup [6, \infty)$

8) $3x - 26 > 39$

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

9) $34 - 12x < -14$ or $45 \geq 9x + 27$

- a) $(-\infty, 2]$ b) $(-\infty, 2] \cup (4, \infty)$
 c) $(-\infty, -2) \cup [4, \infty)$ d) $[2, 4)$

10) $-17 > 10x + 13$ and $8x < x + 21$

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

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