

Identifying Solutions

Multi-step: S3

Choose the correct solution that best describes each inequality.

1) $-15 \geq \frac{x}{4} + x$ and $2x - \frac{7x}{8} > -27$

- a) $(-\infty, -24) \cap (-12, \infty)$ b) $(-\infty, -24] \cap [-12, \infty)$
 c) $(-24, -12]$ d) $(-\infty, -24] \cap (-12, \infty)$

2) $-20 \leq 2x - \frac{3x}{4} \leq -15$

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

3) $17(3x + 35) < 34$ or $-$

- a) $(-\infty, -11) \cup [-3, \infty)$ b) $(-\infty, -11) \cup [3, \infty)$
 c) $(-\infty, -11)$ d) $(-\infty, -11) \cup [3, \infty)$

$8 \leq \frac{5x + 19}{3}$

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

5) $-3 < \frac{5x + 9}{7} \leq 2$

- a) $(-\infty, -6) \cap (1, \infty)$ b) $(-\infty, -6) \cap [1, \infty)$
 c) $(-\infty, -6] \cap [1, \infty)$ d) $(-\infty, -6] \cap (1, \infty)$

or $33 \leq \frac{x}{5} + 2x$

- b) $(-\infty, 5] \cup [15, \infty)$
 d) $(-\infty, 5) \cup [15, \infty)$

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7) $\frac{5x - 13}{9} \geq 3$ or $\frac{x + 29}{6} > 4$

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

8) $\frac{2}{3}(3x + 6) \leq 24$ and $36 \geq 12(4x - 25)$

- a) $(-\infty, 7]$ b) $(-\infty, 7] \cap [10, \infty)$
 c) $(-\infty, 10]$ d) $(-\infty, 7] \cup [10, \infty)$

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