Identifying Solutions

Choose the correct solution that best describes each inequality.

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

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

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

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

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

c) $(-\infty, -11)$ d

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

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

d) $[1, \infty)$

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

a) $(-\infty, -6) \cap (1, \infty)$ b

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

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

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

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

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

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

c) $(-\infty, -5) \cup [8, \infty)$ d) $(-5, \infty)$

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

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

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