1. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$8 - 4x < \frac{25x - 6}{5} \leq 4 + 4x$$

A. $(-\infty, a] \cup (b, \infty)$, where $a \in [-2.02, 0.98]$ and $b \in [-8.2, -1.2]$

B. $(a, b]$, where $a \in [-3.1, 0.1]$ and $b \in [-9.2, 0.8]$

C. $[a, b)$, where $a \in [-1.4, 0.7]$ and $b \in [-8.2, -4.2]$

D. $(-\infty, a) \cup [b, \infty)$, where $a \in [-3.02, -0.02]$ and $b \in [-7.2, 0.8]$

E. None of the above.

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2. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-9x + 6 \leq 5x - 10$$

A. $[a, \infty)$, where $a \in [-1.4, -0.1]$

B. $[a, \infty)$, where $a \in [0.8, 1.7]$

C. $(-\infty, a]$, where $a \in [-1.6, 0.1]$

D. $(-\infty, a]$, where $a \in [-0.5, 2.2]$

E. None of the above.

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3. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$\frac{7}{7} + \frac{9}{5}x < \frac{10}{3}x - \frac{7}{8}$$

A. $(-\infty, a)$, where $a \in [-3.22, 0.78]$

B. (a, ∞), where $a \in [0.22, 2.22]$

C. $(-\infty, a)$, where $a \in [0.22, 2.22]$

D. (a, ∞), where $a \in [-4.22, 0.78]$

E. None of the above.

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4. Using an interval or intervals, describe all the x-values within or including a distance of the given values.

   More than 2 units from the number -3.

   A. $(-5, -1)$

   B. $(-\infty, -5] \cup [-1, \infty)$

   C. $[-5, -1]$

   D. $(-\infty, -5) \cup (-1, \infty)$

   E. None of the above

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5. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

   $$-4 + 3x > 4x \text{ or } 8 + 8x < 9x$$

   A. $(-\infty, a) \cup (b, \infty)$, where $a \in [-8.5, -6.2]$ and $b \in [0, 6]$

   B. $(-\infty, a] \cup [b, \infty)$, where $a \in [-8, -7]$ and $b \in [-1, 5]$

   C. $(-\infty, a] \cup [b, \infty)$, where $a \in [-7, -2]$ and $b \in [8, 16]$

   D. $(-\infty, a) \cup (b, \infty)$, where $a \in [-4.3, -1.7]$ and $b \in [8, 9]$

   E. $(-\infty, \infty)$

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6. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

   $$-7x - 8 > 9x - 7$$

   A. (a, ∞), where $a \in [-0.2, -0.06]$

   B. (a, ∞), where $a \in [-0.03, 0.2]$

   C. $(-\infty, a)$, where $a \in [-0.01, 0.08]$

D. $(-\infty, a)$, where $a \in [-0.17, -0.01]$

E. None of the above.

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7. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$\frac{-6}{8} + \frac{5}{4}x \geq \frac{8}{5}x + \frac{10}{3}$$

A. $(-\infty, a]$, where $a \in [-11.67, -9.67]$

B. $[a, \infty)$, where $a \in [-11.67, -9.67]$

C. $(-\infty, a]$, where $a \in [10.67, 15.67]$

D. $[a, \infty)$, where $a \in [10.67, 16.67]$

E. None of the above.

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8. Using an interval or intervals, describe all the x-values within or including a distance of the given values.

No more than 2 units from the number 4.

A. $(-2, 6)$

B. $(-\infty, -2) \cup (6, \infty)$

C. $(-\infty, -2] \cup [6, \infty)$

D. $[-2, 6]$

E. None of the above

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9. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$7 - 8x < \frac{-41x - 6}{9} \leq 4 - 5x$$

A. $(-\infty, a) \cup [b, \infty)$, where $a \in [0.23, 4.23]$ and $b \in [10.5, 15.5]$

B. $[a, b)$, where $a \in [1.23, 5.23]$ and $b \in [8.5, 14.5]$

C. $(a, b]$, where $a \in [-0.77, 4.23]$ and $b \in [5.5, 13.5]$

D. $(-\infty, a] \cup (b, \infty)$, where $a \in [-0.77, 4.23]$ and $b \in [8.5, 11.5]$

E. None of the above.

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10. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-9 + 9x > 10x \text{ or } 7 + 5x < 8x$$

A. $(-\infty, a) \cup (b, \infty)$, where $a \in [-4.33, -1.33]$ and $b \in [8, 10]$

B. $(-\infty, a] \cup [b, \infty)$, where $a \in [-9, -8]$ and $b \in [-1.67, 5.33]$

C. $(-\infty, a) \cup (b, \infty)$, where $a \in [-14, -5]$ and $b \in [2.33, 5.33]$

D. $(-\infty, a] \cup [b, \infty)$, where $a \in [-3.33, -0.33]$ and $b \in [7, 10]$

E. $(-\infty, \infty)$
