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

$$4 + 5x > 7x \text{ or } 9 + 3x < 6x$$

   A. $(-\infty, a] \cup [b, \infty)$, where $a \in [-3, -1]$ and $b \in [-4, 0]$

   B. $(-\infty, a) \cup (b, \infty)$, where $a \in [-8, -2]$ and $b \in [-8, 0]$

   C. $(-\infty, a) \cup (b, \infty)$, where $a \in [-1, 7]$ and $b \in [3, 5]$

   D. $(-\infty, a] \cup [b, \infty)$, where $a \in [2, 3]$ and $b \in [2, 5]$

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

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

$$\frac{6}{4} - \frac{8}{9}x > \frac{8}{5}x - \frac{6}{2}$$

   A. (a, ∞), where $a \in [-1.81, -0.81]$

   B. (a, ∞), where $a \in [0.81, 2.81]$

   C. $(-\infty, a)$, where $a \in [0.81, 2.81]$

   D. $(-\infty, a)$, where $a \in [-1.81, -0.81]$

   E. None of the above.

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

$$8 + 5x < \frac{49x + 8}{5} \leq 4 + 9x$$

   A. $[a, b)$, where $a \in [-4.33, 0.67]$ and $b \in [-4, -1]$

   B. $(-\infty, a] \cup (b, \infty)$, where $a \in [-1.9, 0.5]$ and $b \in [-6, -2]$

   C. $(a, b]$, where $a \in [-2.2, 0.4]$ and $b \in [-4, -2]$

   D. $(-\infty, a) \cup [b, \infty)$, where $a \in [-2.8, 0.7]$ and $b \in [-5, -2]$

E. None of the above.

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

$$-5x + 6 \geq 9x + 3$$

A. $(-\infty, a]$, where $a \in [-0.24, 0.13]$

B. $[a, \infty)$, where $a \in [0.08, 0.25]$

C. $[a, \infty)$, where $a \in [-0.72, 0.03]$

D. $(-\infty, a]$, where $a \in [0.03, 0.45]$

E. None of the above.

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

Less than 5 units from the number -3.

A. $(-\infty, -8] \cup [2, \infty)$

B. $(-8, 2)$

C. $[-8, 2]$

D. $(-\infty, -8) \cup (2, \infty)$

E. None of the above

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

$$3x + 3 > 5x - 6$$

A. $(-\infty, a)$, where $a \in [1.5, 7.5]$

B. (a, ∞), where $a \in [0.5, 7.5]$

C. (a, ∞), where $a \in [-5.5, -1.5]$

D. $(-\infty, a)$, where $a \in [-6.5, -1.5]$

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.

$$-4 - 7x < \frac{-16x - 6}{3} \leq 9 - 7x$$

A. $(a, b]$, where $a \in [1.2, 7.2]$ and $b \in [-6.6, -2.6]$

B. $(-\infty, a) \cup [b, \infty)$, where $a \in [-0.8, 3.2]$ and $b \in [-12.6, -2.6]$

C. $[a, b)$, where $a \in [0.1, 1.9]$ and $b \in [-6.6, -4.6]$

D. $(-\infty, a] \cup (b, \infty)$, where $a \in [1.2, 3.2]$ and $b \in [-6.6, -4.6]$

E. None of the above.

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

$$5 + 4x > 6x \text{ or } 5 + 7x < 8x$$

A. $(-\infty, a) \cup (b, \infty)$, where $a \in [-8, -1]$ and $b \in [-5.5, -0.5]$

B. $(-\infty, a] \cup [b, \infty)$, where $a \in [-1.5, 4.5]$ and $b \in [5, 6]$

C. $(-\infty, a] \cup [b, \infty)$, where $a \in [-5, -1]$ and $b \in [-5.5, -1.5]$

D. $(-\infty, a) \cup (b, \infty)$, where $a \in [-0.5, 5.5]$ and $b \in [-2, 6]$

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

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

$$\frac{5}{5} - \frac{4}{3}x < \frac{9}{9}x - \frac{7}{4}$$

A. $(-\infty, a)$, where $a \in [-1.18, 0.82]$

B. $(-\infty, a)$, where $a \in [-0.82, 2.18]$

C. (a, ∞), where $a \in [-3.18, 0.82]$

D. (a, ∞), where $a \in [-0.82, 2.18]$

E. None of the above.

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

$$\text{Less than 7 units from the number } -9.$$

A. $(-\infty, -16) \cup (-2, \infty)$

B. $(-16, -2)$

C. $[-16, -2]$

D. $(-\infty, -16] \cup [-2, \infty)$

E. None of the above