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

$$-5 + 3x > 5x \text{ or } 7 + 6x < 8x$$

A. $(-\infty, a] \cup [b, \infty)$, where $a \in [-2.56, -2.25]$ and $b \in [3.39, 3.77]$

B. $(-\infty, a) \cup (b, \infty)$, where $a \in [-2.9, -1.8]$ and $b \in [2.63, 4.43]$

C. $(-\infty, a] \cup [b, \infty)$, where $a \in [-3.75, -3.25]$ and $b \in [2.41, 2.71]$

D. $(-\infty, a) \cup (b, \infty)$, where $a \in [-5.1, -3.1]$ and $b \in [2.37, 3.21]$

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

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

$$\frac{-9}{2} - \frac{9}{7}x \geq \frac{7}{9}x + \frac{5}{5}$$

A. $(-\infty, a]$, where $a \in [-3.67, 0.33]$

B. $(-\infty, a]$, where $a \in [-0.33, 3.67]$

C. $[a, \infty)$, where $a \in [-6.67, 1.33]$

D. $[a, \infty)$, where $a \in [1.67, 7.67]$

E. None of the above.

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

$$-9 - 4x < \frac{-30x - 6}{8} \leq -3 - 5x$$

A. $(-\infty, a) \cup [b, \infty)$, where $a \in [-36, -30]$ and $b \in [-1.8, 0.2]$

B. $(a, b]$, where $a \in [-36, -30]$ and $b \in [-4.8, 0.2]$

C. $[a, b)$, where $a \in [-37, -32]$ and $b \in [-5.8, 1.2]$

D. $(-\infty, a] \cup (b, \infty)$, where $a \in [-36, -29]$ and $b \in [-1.8, 1.2]$

E. None of the above.

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

$$8x - 7 < 10x + 10$$

A. $(-\infty, a),$ where $a \in [5.5, 10.5]$

B. $(-\infty, a),$ where $a \in [-15.5, -3.5]$

C. $(a, \infty),$ where $a \in [5.5, 12.5]$

D. $(a, \infty),$ where $a \in [-10.5, -2.5]$

E. None of the above.

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

No more than 4 units from the number 9.

A. $[5, 13]$

B. $(-\infty, 5] \cup [13, \infty)$

C. $(-\infty, 5) \cup (13, \infty)$

D. $(5, 13)$

E. None of the above

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

$$-10x - 4 > -6x - 7$$

A. $(a, \infty),$ where $a \in [-0.96, -0.47]$

B. $(-\infty, a),$ where $a \in [-4.6, 0.1]$

C. $(-\infty, a),$ where $a \in [0.6, 3.1]$

D. (a, ∞), where $a \in [0.62, 0.86]$

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.

$$-7 - 8x < \frac{-22x - 5}{3} \leq -5 - 8x$$

A. $(a, b]$, where $a \in [-8, -3]$ and $b \in [-7, 0]$

B. $[a, b)$, where $a \in [-11, -3]$ and $b \in [-7, -1]$

C. $(-\infty, a) \cup [b, \infty)$, where $a \in [-13, -3]$ and $b \in [-6, -2]$

D. $(-\infty, a] \cup (b, \infty)$, where $a \in [-9, -7]$ and $b \in [-7, -1]$

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.

$$3 + 6x > 9x \text{ or } 6 + 6x < 8x$$

A. $(-\infty, a) \cup (b, \infty)$, where $a \in [1, 2]$ and $b \in [1, 6]$

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

C. $(-\infty, a) \cup (b, \infty)$, where $a \in [-4, -2]$ and $b \in [-1, 0]$

D. $(-\infty, a] \cup [b, \infty)$, where $a \in [-3, 0]$ and $b \in [-4, 2]$

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.

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

A. $[a, \infty)$, where $a \in [-4.62, -2.62]$

B. $[a, \infty)$, where $a \in [2.62, 7.62]$

C. $(-\infty, a]$, where $a \in [-7.62, -3.62]$

D. $(-\infty, a]$, where $a \in [3.62, 5.62]$

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.

$$\text{No more than 9 units from the number 5.}$$

A. $(-\infty, -4] \cup [14, \infty)$

B. $[-4, 14]$

C. $(-\infty, -4) \cup (14, \infty)$

D. $(-4, 14)$

E. None of the above