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

$$-4x - 3 \geq 6x + 3$$

A. $[a, \infty)$, where $a \in [-1.6, 0.4]$

B. $(-\infty, a]$, where $a \in [0.17, 1.19]$

C. $(-\infty, a]$, where $a \in [-1.12, -0.25]$

D. $[a, \infty)$, where $a \in [0.6, 3.6]$

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.

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

A. $(-\infty, a] \cup [b, \infty)$, where $a \in [-2.05, -1.97]$ and $b \in [2.37, 3.17]$

B. $(-\infty, a) \cup (b, \infty)$, where $a \in [-2.16, -0.58]$ and $b \in [2.34, 3.44]$

C. $(-\infty, a) \cup (b, \infty)$, where $a \in [-3.91, -2.75]$ and $b \in [1.99, 2.05]$

D. $(-\infty, a] \cup [b, \infty)$, where $a \in [-3.24, -2.72]$ and $b \in [0.99, 2.39]$

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

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

$$-6 + 6x > 7x \text{ or } -5 + 8x < 9x$$

A. $(-\infty, a] \cup [b, \infty)$, where $a \in [5, 10]$ and $b \in [5, 7]$

B. $(-\infty, a] \cup [b, \infty)$, where $a \in [-10, -3]$ and $b \in [-12, -4]$

C. $(-\infty, a) \cup (b, \infty)$, where $a \in [2, 13]$ and $b \in [6, 14]$

D. $(-\infty, a) \cup (b, \infty)$, where $a \in [-9, -5]$ and $b \in [-5, 1]$

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

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

$$\frac{-7}{3} - \frac{8}{7}x \ge \frac{6}{5}x + \frac{3}{6}$$

A. $[a, \infty)$, where $a \in [-0.79, 2.21]$

B. $(-\infty, a]$, where $a \in [-4.21, 0.79]$

C. $[a, \infty)$, where $a \in [-1.21, -0.21]$

D. $(-\infty, a]$, where $a \in [0.21, 3.21]$

E. None of the above.

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

$$-10x - 10 \le 10x + 7$$

A. $(-\infty, a]$, where $a \in [-2.7, 0.4]$

B. $[a, \infty)$, where $a \in [-2.5, 0.2]$

C. $(-\infty, a]$, where $a \in [-0.5, 2.4]$

D. $[a, \infty)$, where $a \in [-0.8, 2.4]$

E. None of the above.

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

Less than 8 units from the number -3.

A. $[-11, 5]$

B. $(-11, 5)$

C. $(-\infty, -11] \cup [5, \infty)$

D. $(-\infty, -11) \cup (5, \infty)$

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.

$$-8 + 3x \le \frac{23x - 4}{7} < -6 + 3x$$

A. $(a, b]$, where $a \in [26, 27]$ and $b \in [19, 21]$

B. $[a, b)$, where $a \in [26, 27]$ and $b \in [19, 24]$

C. $(-\infty, a) \cup [b, \infty)$, where $a \in [23, 28]$ and $b \in [19, 21]$

D. $(-\infty, a] \cup (b, \infty)$, where $a \in [23, 29]$ and $b \in [19, 23]$

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.

$$-7 + 9x \le \frac{84x + 3}{9} < -9 + 5x$$

A. $(-\infty, a) \cup [b, \infty)$, where $a \in [-22, -17]$ and $b \in [-5.15, 0.85]$

B. $(a, b]$, where $a \in [-26, -21]$ and $b \in [-3.15, 1.85]$

C. $[a, b)$, where $a \in [-23, -19]$ and $b \in [-4.15, -0.15]$

D. $(-\infty, a] \cup (b, \infty)$, where $a \in [-22, -19]$ and $b \in [-8.15, 1.85]$

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.

$$\frac{-10}{8} - \frac{10}{9}x > \frac{-9}{4}x + \frac{6}{6}$$

A. (a, ∞), where $a \in [0.98, 5.98]$

B. $(-\infty, a)$, where $a \in [-0.02, 6.98]$

C. (a, ∞), where $a \in [-2.98, 1.02]$

D. $(-\infty, a)$, where $a \in [-3.98, -0.98]$

E. None of the above.

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

More than 7 units from the number -9.

A. $(-16, -2)$

B. $[-16, -2]$

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

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

E. None of the above