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

$$-8x + 6 \leq 6x + 9$$

   A. $[a, \infty)$, where $a \in [-0.01, 1.64]$

   B. $[a, \infty)$, where $a \in [-0.91, 0.05]$

   C. $(-\infty, a]$, where $a \in [0.09, 0.53]$

   D. $(-\infty, a]$, where $a \in [-0.8, -0.1]$

   E. None of the above.

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

No more than 3 units from the number 10.

   A. $(-\infty, -7) \cup (13, \infty)$

   B. $[-7, 13]$

   C. $(-\infty, -7] \cup [13, \infty)$

   D. $(-7, 13)$

   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.

$$-6 + 8x \leq \frac{66x + 9}{8} < 7 + 7x$$

   A. $(-\infty, a) \cup [b, \infty)$, where $a \in [27.5, 31.5]$ and $b \in [-6.7, 0.3]$

   B. $(-\infty, a] \cup (b, \infty)$, where $a \in [27.5, 31.5]$ and $b \in [-6.7, -2.7]$

   C. $(a, b]$, where $a \in [26.5, 30.5]$ and $b \in [-4.7, -3.7]$

   D. $[a, b)$, where $a \in [23.5, 33.5]$ and $b \in [-4.7, -3.7]$

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.

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

A. $[a, \infty)$, where $a \in [-11.45, -6.45]$

B. $(-\infty, a]$, where $a \in [9.45, 10.45]$

C. $(-\infty, a]$, where $a \in [-11.45, -7.45]$

D. $[a, \infty)$, where $a \in [9.45, 11.45]$

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.

$$8 - 3x > 5x \text{ or } 9 + 8x < 10x$$

A. $(-\infty, a] \cup [b, \infty)$, where $a \in [-4.5, -2.5]$ and $b \in [-1, 3]$

B. $(-\infty, a] \cup [b, \infty)$, where $a \in [-4, 2]$ and $b \in [1.5, 7.5]$

C. $(-\infty, a) \cup (b, \infty)$, where $a \in [-5.5, -0.5]$ and $b \in [-1, 2]$

D. $(-\infty, a) \cup (b, \infty)$, where $a \in [0, 5]$ and $b \in [1.5, 5.5]$

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.

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

A. $(-\infty, a) \cup (b, \infty)$, where $a \in [-3.67, -0.67]$ and $b \in [3, 8]$

B. $(-\infty, a] \cup [b, \infty)$, where $a \in [-3.8, -1.4]$ and $b \in [5, 12]$

C. $(-\infty, a) \cup (b, \infty)$, where $a \in [-6, -3]$ and $b \in [-1.33, 3.67]$

D. $(-\infty, a] \cup [b, \infty)$, where $a \in [-6.2, -3.4]$ and $b \in [-2.33, 3.67]$

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

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

$$-4 - 7x < \frac{-18x + 4}{3} \leq 8 - 9x$$

A. $(-\infty, a] \cup (b, \infty)$, where $a \in [5.33, 10.33]$ and $b \in [-8.22, -1.22]$

B. $(a, b]$, where $a \in [3.33, 11.33]$ and $b \in [-6.22, 0.78]$

C. $[a, b)$, where $a \in [1.33, 9.33]$ and $b \in [-3.22, 0.78]$

D. $(-\infty, a) \cup [b, \infty)$, where $a \in [5.33, 6.33]$ and $b \in [-4.22, 0.78]$

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 10 units from the number 6.

A. $(-\infty, -4] \cup [16, \infty)$

B. $(-4, 16)$

C. $[-4, 16]$

D. $(-\infty, -4) \cup (16, \infty)$

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.

$$\frac{9}{2} + \frac{7}{7}x \geq \frac{10}{9}x + \frac{3}{5}$$

A. $[a, \infty)$, where $a \in [-36.1, -33.1]$

B. $(-\infty, a]$, where $a \in [-37.1, -34.1]$

C. $[a, \infty)$, where $a \in [34.1, 38.1]$

D. $(-\infty, a]$, where $a \in [35.1, 38.1]$

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.

$$-7x - 6 \leq 7x + 5$$

A. $[a, \infty)$, where $a \in [0.4, 2.3]$

B. $(-\infty, a]$, where $a \in [-0.9, 0.3]$

C. $(-\infty, a]$, where $a \in [0.4, 4.8]$

D. $[a, \infty)$, where $a \in [-1.8, 0]$

E. None of the above.
