1. 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 5.

   A. $[3, 7]$

   B. $(-\infty, 3) \cup (7, \infty)$

   C. $(-\infty, 3] \cup [7, \infty)$

   D. $(3, 7)$

   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.

   $$-6x - 4 \geq 7x - 10$$

   A. $(-\infty, a]$, where $a \in [-0.05, 0.49]$

   B. $[a, \infty)$, where $a \in [-0.6, 0.3]$

   C. $[a, \infty)$, where $a \in [-0.1, 3.6]$

   D. $(-\infty, a]$, where $a \in [-0.67, -0.25]$

   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.

   $$-3 + 3x > 4x \text{ or } 4 + 9x < 11x$$

   A. $(-\infty, a) \cup (b, \infty)$, where $a \in [-5.8, -2.6]$ and $b \in [1.32, 2.3]$

   B. $(-\infty, a] \cup [b, \infty)$, where $a \in [-2.45, -1.74]$ and $b \in [2.05, 3.72]$

   C. $(-\infty, a) \cup (b, \infty)$, where $a \in [-2.3, -0.4]$ and $b \in [2.3, 3.89]$

   D. $(-\infty, a] \cup [b, \infty)$, where $a \in [-3.75, -2.88]$ and $b \in [1.47, 2.04]$

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

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

$$-9 + 3x < \frac{66x - 9}{7} \leq 7 + 9x$$

A. $[a, b)$, where $a \in [1.2, 6.2]$ and $b \in [-23.33, -15.33]$

B. $(a, b]$, where $a \in [1.2, 8.2]$ and $b \in [-21.33, -13.33]$

C. $(-\infty, a) \cup [b, \infty)$, where $a \in [0, 3]$ and $b \in [-20.33, -14.33]$

D. $(-\infty, a] \cup (b, \infty)$, where $a \in [1.2, 2.2]$ and $b \in [-21.33, -17.33]$

E. None of the above.

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

$$-4 + 7x > 9x \text{ or } 3 + 8x < 9x$$

A. $(-\infty, a] \cup [b, \infty)$, where $a \in [-3.8, -2.47]$ and $b \in [1.95, 2.67]$

B. $(-\infty, a] \cup [b, \infty)$, where $a \in [-2.46, -0.86]$ and $b \in [2.48, 3.2]$

C. $(-\infty, a) \cup (b, \infty)$, where $a \in [-5.1, -2.1]$ and $b \in [1.52, 2.35]$

D. $(-\infty, a) \cup (b, \infty)$, where $a \in [-2.2, -1.9]$ and $b \in [2.47, 4.04]$

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

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

More than 4 units from the number -8.

A. $(-\infty, -12] \cup [-4, \infty)$

B. $(-12, -4)$

C. $[-12, -4]$

D. $(-\infty, -12) \cup (-4, \infty)$

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.

$$-6 - 5x < \frac{-25x - 4}{7} \leq 8 - 4x$$

A. $[a, b)$, where $a \in [1.8, 6.8]$ and $b \in [-24, -19]$

B. $(a, b]$, where $a \in [3.8, 6.8]$ and $b \in [-22, -18]$

C. $(-\infty, a) \cup [b, \infty)$, where $a \in [0.8, 4.8]$ and $b \in [-23, -15]$

D. $(-\infty, a] \cup (b, \infty)$, where $a \in [2.8, 4.8]$ and $b \in [-23, -17]$

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.

$$\frac{7}{8} + \frac{5}{2}x < \frac{10}{3}x - \frac{6}{6}$$

A. $(-\infty, a)$, where $a \in [1.25, 3.25]$

B. (a, ∞), where $a \in [2.25, 6.25]$

C. $(-\infty, a)$, where $a \in [-3.25, -1.25]$

D. (a, ∞), where $a \in [-4.25, -0.25]$

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.

$$\frac{10}{2} - \frac{4}{8}x < \frac{9}{9}x + \frac{4}{5}$$

A. $(-\infty, a)$, where $a \in [-2.8, 0.2]$

B. $(-\infty, a)$, where $a \in [2.8, 4.8]$

C. (a, ∞), where $a \in [1.8, 4.8]$

D. (a, ∞), where $a \in [-4.8, 0.2]$

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.

$$-4x + 10 < 5x - 8$$

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

B. $(-\infty, a)$, where $a \in [0, 6]$

C. (a, ∞), where $a \in [-8, -1]$

D. (a, ∞), where $a \in [0, 6]$

E. None of the above.
