

11. 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 1.

- A. $(-\infty, 7] \cup [9, \infty)$
- B. $(-\infty, 7) \cup (9, \infty)$
- C. $[7, 9]$
- D. $(7, 9)$
- E. None of the above

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

$$-5 + 3x < \frac{49x + 6}{9} \leq 3 + 5x$$

- A. $(-\infty, a) \cup [b, \infty)$, where $a \in [-3, -2]$ and $b \in [1, 11]$
- B. $[a, b)$, where $a \in [-5, 0]$ and $b \in [3, 11]$
- C. $(-\infty, a] \cup (b, \infty)$, where $a \in [-3, 2]$ and $b \in [4, 8]$
- D. $(a, b]$, where $a \in [-6, 0]$ and $b \in [1, 12]$
- E. None of the above.

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

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

- A. $(-\infty, a] \cup [b, \infty)$, where $a \in [-2.3, 0.8]$ and $b \in [2.7, 5.3]$
- B. $(-\infty, a] \cup [b, \infty)$, where $a \in [-6, -3.2]$ and $b \in [0.4, 3.5]$
- C. $(-\infty, a) \cup (b, \infty)$, where $a \in [-2, 0.1]$ and $b \in [4, 8]$
- D. $(-\infty, a) \cup (b, \infty)$, where $a \in [-5.4, -4]$ and $b \in [-4, 4]$
- E. $(-\infty, \infty)$

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

$$\frac{-7}{2} - \frac{8}{9}x \geq \frac{-6}{7}x + \frac{3}{3}$$

- A. $(-\infty, a]$, where $a \in [141, 144]$
- B. $(-\infty, a]$, where $a \in [-143, -138]$
- C. $[a, \infty)$, where $a \in [-144, -141]$
- D. $[a, \infty)$, where $a \in [137, 144]$
- E. None of the above.

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

$$-8x + 3 > -3x + 5$$

- A. $(-\infty, a)$, where $a \in [-0.96, -0.35]$
 - B. (a, ∞) , where $a \in [0.29, 1.59]$
 - C. (a, ∞) , where $a \in [-1.4, -0.33]$
 - D. $(-\infty, a)$, where $a \in [0.2, 0.71]$
 - E. None of the above.
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