

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

$$\frac{7}{4} - \frac{10}{9}x < \frac{9}{8}x + \frac{8}{2}$$

- A. (a, ∞) , where $a \in [-6, 1]$
 - B. $(-\infty, a)$, where $a \in [0, 4]$
 - C. $(-\infty, a)$, where $a \in [-4, 0]$
 - D. (a, ∞) , where $a \in [-1, 5]$
 - 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.

$$-3 + 9x > 12x \quad \text{or} \quad 7 + 9x < 11x$$

- A. $(-\infty, a] \cup [b, \infty)$, where $a \in [-2.6, -0.1]$ and $b \in [3, 4]$
 - B. $(-\infty, a) \cup (b, \infty)$, where $a \in [-5, -2]$ and $b \in [-0.8, 2.3]$
 - C. $(-\infty, a] \cup [b, \infty)$, where $a \in [-7.2, -2.6]$ and $b \in [-2, 2]$
 - D. $(-\infty, a) \cup (b, \infty)$, where $a \in [-2, 3]$ and $b \in [1.8, 3.6]$
 - E. $(-\infty, \infty)$
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13. 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 2.

- A. $(-6, 10)$
 - B. $[-6, 10]$
 - C. $(-\infty, -6) \cup (10, \infty)$
 - D. $(-\infty, -6] \cup [10, \infty)$
 - E. None of the above
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14. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-5 + 9x < \frac{56x + 7}{6} \leq -6 + 3x$$

- A. $(a, b]$, where $a \in [18, 20]$ and $b \in [0.7, 3.6]$
- B. $[a, b)$, where $a \in [13, 21]$ and $b \in [1, 5]$
- C. $(-\infty, a) \cup [b, \infty)$, where $a \in [16, 21]$ and $b \in [0, 2]$
- D. $(-\infty, a] \cup (b, \infty)$, where $a \in [17, 21]$ and $b \in [-1, 4]$
- E. None of the above.

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

$$4x - 4 < 7x + 7$$

- A. (a, ∞) , where $a \in [-6, 3]$
 - B. $(-\infty, a)$, where $a \in [-9, 3]$
 - C. (a, ∞) , where $a \in [3, 6]$
 - D. $(-\infty, a)$, where $a \in [2, 7]$
 - E. None of the above.
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