

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

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

- A. $(-\infty, a] \cup [b, \infty)$, where $a \in [-5.5, -3.8]$ and $b \in [-1, 4]$
 - B. $(-\infty, a) \cup (b, \infty)$, where $a \in [-4, 1]$ and $b \in [4, 7.1]$
 - C. $(-\infty, a) \cup (b, \infty)$, where $a \in [-8, -3]$ and $b \in [2.1, 3.8]$
 - D. $(-\infty, a] \cup [b, \infty)$, where $a \in [-3.3, -0.8]$ and $b \in [4, 8]$
 - E. $(-\infty, \infty)$
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12. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$6 - 9x < \frac{-28x + 3}{6} \leq 6 - 5x$$

- A. $(a, b]$, where $a \in [-2, -0.5]$ and $b \in [-18, -13]$
 - B. $[a, b)$, where $a \in [-2.8, -1.2]$ and $b \in [-18, -14]$
 - C. $(-\infty, a) \cup [b, \infty)$, where $a \in [-3.6, -0.4]$ and $b \in [-21, -13]$
 - D. $(-\infty, a] \cup (b, \infty)$, where $a \in [-6, -1]$ and $b \in [-20, -16]$
 - 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.

$$-8x + 6 < 4x - 9$$

- A. $(-\infty, a)$, where $a \in [-1, 7]$
 - B. $(-\infty, a)$, where $a \in [-9, 1]$
 - C. (a, ∞) , where $a \in [0, 2]$
 - D. (a, ∞) , where $a \in [-2, 1]$
 - 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.

$$\frac{6}{3} - \frac{4}{9}x > \frac{5}{7}x - \frac{5}{4}$$

- A. $(-\infty, a)$, where $a \in [-6, -2]$
- B. (a, ∞) , where $a \in [-5, 0]$
- C. $(-\infty, a)$, where $a \in [2, 5]$
- D. (a, ∞) , where $a \in [0, 6]$
- E. None of the above.

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

No less than 8 units from the number 9.

- A. $(1, 17)$
 - B. $(-\infty, 1] \cup [17, \infty)$
 - C. $(-\infty, 1) \cup (17, \infty)$
 - D. $[1, 17]$
 - E. None of the above
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