

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

$$-9x + 7 \leq 7x + 9$$

- A. $(-\infty, a]$, where $a \in [0.04, 0.4]$
 - B. $(-\infty, a]$, where $a \in [-0.17, 0.04]$
 - C. $[a, \infty)$, where $a \in [-0.18, -0.06]$
 - D. $[a, \infty)$, where $a \in [0.04, 0.23]$
 - 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.

$$-3 + 4x > 6x \text{ or } 7 + 7x < 9x$$

- A. $(-\infty, a] \cup [b, \infty)$, where $a \in [-7, -2]$ and $b \in [0.8, 2.5]$
 - B. $(-\infty, a] \cup [b, \infty)$, where $a \in [-2, 0]$ and $b \in [3.1, 6]$
 - C. $(-\infty, a) \cup (b, \infty)$, where $a \in [-5, -2]$ and $b \in [0, 2]$
 - D. $(-\infty, a) \cup (b, \infty)$, where $a \in [-3, 0]$ and $b \in [3, 5]$
 - E. $(-\infty, \infty)$
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3. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-9 + 5x < \frac{23x + 3}{4} \leq 7 + 4x$$

- A. $(a, b]$, where $a \in [7, 18]$ and $b \in [-4, -1]$
- B. $[a, b)$, where $a \in [10, 19]$ and $b \in [-5, 0]$
- C. $(-\infty, a) \cup [b, \infty)$, where $a \in [11, 14]$ and $b \in [-8, 0]$

- D. $(-\infty, a] \cup (b, \infty)$, where $a \in [12, 18]$ and $b \in [-5, 1]$
- 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.

$$\frac{8}{6} - \frac{9}{5}x > \frac{5}{9}x - \frac{10}{3}$$

- A. (a, ∞) , where $a \in [0, 4]$
- B. $(-\infty, a)$, where $a \in [0, 4]$
- C. $(-\infty, a)$, where $a \in [-3, 0]$
- D. (a, ∞) , where $a \in [-3, 1]$
- E. None of the above.
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5. Using an interval or intervals, describe all the x -values within or including a distance of the given values.

More than 6 units from the number 1.

- A. $(-\infty, 5) \cup (7, \infty)$
- B. $(5, 7)$
- C. $[5, 7]$
- D. $(-\infty, 5] \cup [7, \infty)$
- E. None of the above
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