

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

$$-8x + 4 < 3x + 3$$

- A.  $(a, \infty)$ , where  $a \in [-0.02, 0.78]$
- B.  $(a, \infty)$ , where  $a \in [-0.31, -0.03]$
- C.  $(-\infty, a)$ , where  $a \in [-0.42, -0.09]$
- D.  $(-\infty, a)$ , where  $a \in [0, 0.12]$
- 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.

$$-6 - 5x \leq \frac{-19x - 7}{8} < 3 - 3x$$

- A.  $[a, b]$ , where  $a \in [1, 5]$  and  $b \in [-12, -4]$
- B.  $(-\infty, a) \cup [b, \infty)$ , where  $a \in [0, 6]$  and  $b \in [-8, -1]$
- C.  $(a, b]$ , where  $a \in [0, 6]$  and  $b \in [-9, -4]$
- D.  $(-\infty, a] \cup (b, \infty)$ , where  $a \in [-1, 7]$  and  $b \in [-9, -2]$
- 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.

$$\frac{-8}{4} - \frac{9}{6}x \geq \frac{-4}{9}x - \frac{10}{3}$$

- A.  $(-\infty, a]$ , where  $a \in [0.1, 2]$
- B.  $(-\infty, a]$ , where  $a \in [-2.8, -0.8]$
- C.  $[a, \infty)$ , where  $a \in [-6, 1]$
- D.  $[a, \infty)$ , where  $a \in [-1, 9]$
- E. None of the above.

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

No less than 4 units from the number 3.

- A.  $(-\infty, -1) \cup (7, \infty)$
- B.  $[-1, 7]$
- C.  $(-\infty, -1] \cup [7, \infty)$
- D.  $(-1, 7)$

E. None of the above

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

$$-9 + 5x > 6x \quad \text{or} \quad -4 + 9x < 12x$$

- A.  $(-\infty, a) \cup (b, \infty)$ , where  $a \in [-13, -6]$  and  $b \in [-3, 2]$   
B.  $(-\infty, a] \cup [b, \infty)$ , where  $a \in [-12, -7]$  and  $b \in [-6, 2]$   
C.  $(-\infty, a] \cup [b, \infty)$ , where  $a \in [-1, 4]$  and  $b \in [5, 14]$   
D.  $(-\infty, a) \cup (b, \infty)$ , where  $a \in [1, 5]$  and  $b \in [7, 10]$   
E.  $(-\infty, \infty)$
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