

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

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

- A. (a, ∞) , where $a \in [0.32, 3.32]$
 - B. $(-\infty, a)$, where $a \in [0.32, 2.32]$
 - C. $(-\infty, a)$, where $a \in [-6.32, 0.68]$
 - D. (a, ∞) , where $a \in [-3.32, -0.32]$
 - E. None of the above.
-

2. 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 -4 .

- A. $(-\infty, -12) \cup (4, \infty)$
 - B. $(-\infty, -12] \cup [4, \infty)$
 - C. $[-12, 4]$
 - D. $(-12, 4)$
 - E. None of the above
-

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

$$-8 + 9x < \frac{32x + 6}{3} \leq -7 + 5x$$

- A. $[a, b)$, where $a \in [4, 8]$ and $b \in [-1.41, 4.59]$
- B. $(a, b]$, where $a \in [5, 8]$ and $b \in [0.59, 6.59]$
- C. $(-\infty, a] \cup (b, \infty)$, where $a \in [6, 8]$ and $b \in [0.59, 7.59]$
- D. $(-\infty, a) \cup [b, \infty)$, where $a \in [3, 8]$ and $b \in [0.6, 4]$

E. None of the above.

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

$$\frac{-7}{5} - \frac{7}{8}x > \frac{-5}{6}x + \frac{4}{9}$$

- A. $(-\infty, a)$, where $a \in [-47.27, -42.27]$
B. $(-\infty, a)$, where $a \in [43.27, 47.27]$
C. (a, ∞) , where $a \in [-44.27, -38.27]$
D. (a, ∞) , where $a \in [42.27, 48.27]$
E. None of the above.
-

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

$$-9x + 4 \geq 6x - 3$$

- A. $(-\infty, a]$, where $a \in [0.3, 0.48]$
B. $[a, \infty)$, where $a \in [-0.6, 0.1]$
C. $(-\infty, a]$, where $a \in [-2.57, -0.12]$
D. $[a, \infty)$, where $a \in [0.2, 4.3]$
E. None of the above.
-

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

$$-9x + 7 \geq -4x + 10$$

- A. $[a, \infty)$, where $a \in [0.6, 2.6]$
B. $(-\infty, a]$, where $a \in [0.6, 2.6]$

- C. $(-\infty, a]$, where $a \in [-4.6, 0.4]$
 - D. $[a, \infty)$, where $a \in [-3.6, 0.4]$
 - E. None of the above.
-

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

$$-8 - 3x > 5x \text{ or } 5 + 8x < 9x$$

- A. $(-\infty, a] \cup [b, \infty)$, where $a \in [-5.3, -4.5]$ and $b \in [-3, 2]$
 - B. $(-\infty, a) \cup (b, \infty)$, where $a \in [-5, -2]$ and $b \in [1, 2]$
 - C. $(-\infty, a) \cup (b, \infty)$, where $a \in [-3, 1]$ and $b \in [2, 6]$
 - D. $(-\infty, a] \cup [b, \infty)$, where $a \in [-2.2, -0.5]$ and $b \in [3, 6]$
 - E. $(-\infty, \infty)$
-

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

More than 8 units from the number -6 .

- A. $[-14, 2]$
 - B. $(-14, 2)$
 - C. $(-\infty, -14) \cup (2, \infty)$
 - D. $(-\infty, -14] \cup [2, \infty)$
 - E. None of the above
-

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

$$-5 + 7x > 10x \text{ or } 8 + 6x < 8x$$

- A. $(-\infty, a] \cup [b, \infty)$, where $a \in [-4, -3]$ and $b \in [1.6, 2.5]$

- B. $(-\infty, a) \cup (b, \infty)$, where $a \in [-4, -2]$ and $b \in [-0.33, 3.67]$
 - C. $(-\infty, a] \cup [b, \infty)$, where $a \in [-3.67, 2.33]$ and $b \in [2.4, 4.1]$
 - D. $(-\infty, a) \cup (b, \infty)$, where $a \in [-1.67, 1.33]$ and $b \in [4, 8]$
 - E. $(-\infty, \infty)$
-

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

$$-5 - 6x < \frac{-34x - 8}{6} \leq -3 - 6x$$

- A. $(-\infty, a) \cup [b, \infty)$, where $a \in [7, 12]$ and $b \in [2, 7]$
 - B. $(a, b]$, where $a \in [11, 15]$ and $b \in [2, 8]$
 - C. $[a, b)$, where $a \in [9, 14]$ and $b \in [4, 8]$
 - D. $(-\infty, a] \cup (b, \infty)$, where $a \in [11, 13]$ and $b \in [3, 7]$
 - E. None of the above.
-