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

No more than 3 units from the number 4.

A. $[-1, 7]$

B. $(-1, 7)$

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

D. $(-\infty, -1) \cup (7, \infty)$

E. None of the above

---

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

$$-6x + 4 \geq 3x - 5$$

A. $[a, \infty)$, where $a \in [1, 2]$

B. $[a, \infty)$, where $a \in [-4, 0]$

C. $(-\infty, a]$, where $a \in [-1.5, 0]$

D. $(-\infty, a]$, where $a \in [-0.6, 2.3]$

E. None of the above.

---

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

$$-6 - 5x < \frac{-30x + 3}{7} \leq 6 - 7x$$

A. $[a, b)$, where $a \in [-10.5, -6.75]$ and $b \in [0, 3]$

B. $(-\infty, a] \cup (b, \infty)$, where $a \in [-9.75, -5.25]$ and $b \in [-1.5, 13.5]$

C. $(-\infty, a) \cup [b, \infty)$, where $a \in [-15.75, -8.25]$ and $b \in [0.75, 3]$

D. $(a, b]$, where $a \in [-11.25, -6.75]$ and $b \in [0.75, 8.25]$

E. None of the above.

---

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

$$-9x + 9 \leq -7x + 6$$

A. $(-\infty, a]$, where $a \in [0.5, 3.5]$

B. $[a, \infty)$, where $a \in [-2.8, -1]$

C. $[a, \infty)$, where $a \in [0.9, 1.9]$

D. $(-\infty, a]$, where $a \in [-5.5, 0.5]$

E. None of the above.

---

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

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

A. $(-\infty, a) \cup (b, \infty)$, where $a \in [0.75, 7.5]$ and $b \in [3, 9.75]$

B. $(-\infty, a] \cup [b, \infty)$, where $a \in [-1.5, 3]$ and $b \in [1.5, 6]$

C. $(-\infty, a) \cup (b, \infty)$, where $a \in [-9, -3.75]$ and $b \in [-5.25, 0]$

D. $(-\infty, a] \cup [b, \infty)$, where $a \in [-8.25, -3.75]$ and $b \in [-4.5, 0.75]$

E. $(-\infty, \infty)$

---

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

$$-9 + 5x \leq \frac{66x - 4}{8} < 8 + 8x$$

A. $(a, b]$, where $a \in [-3.75, 1.5]$ and $b \in [30.75, 36]$

B. $[a, b)$, where $a \in [-6, 2.25]$ and $b \in [28.5, 36.75]$

C. $(-\infty, a] \cup (b, \infty)$, where $a \in [-3, -0.75]$ and $b \in [32.25, 39]$

D. $(-\infty, a) \cup [b, \infty)$, where $a \in [-6.75, -0.75]$ and $b \in [33.75, 35.25]$

E. None of the above.

---

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

$$-6 + 5x > 8x \text{ or } 6 + 3x < 5x$$

A. $(-\infty, a) \cup (b, \infty)$, where $a \in [-2.79, -1.49]$ and $b \in [2.1, 4.8]$

B. $(-\infty, a) \cup (b, \infty)$, where $a \in [-3.39, -2.93]$ and $b \in [-0.38, 2.32]$

C. $(-\infty, a] \cup [b, \infty)$, where $a \in [-2.48, -0.3]$ and $b \in [2.4, 4.88]$

D. $(-\infty, a] \cup [b, \infty)$, where $a \in [-4.95, -2.62]$ and $b \in [0.82, 2.32]$

E. $(-\infty, \infty)$

---

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

$$\frac{5}{9} + \frac{7}{6}x \leq \frac{10}{7}x - \frac{3}{3}$$

A. $[a, \infty)$, where $a \in [4.5, 8.25]$

B. $(-\infty, a]$, where $a \in [3.75, 8.25]$

C. $[a, \infty)$, where $a \in [-9, -5.25]$

D. $(-\infty, a]$, where $a \in [-8.25, -3.75]$

E. None of the above.

---

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

$$\frac{6}{2} + \frac{3}{5}x > \frac{8}{8}x + \frac{5}{4}$$

A. (a, ∞), where $a \in [3.75, 4.5]$

B. $(-\infty, a)$, where $a \in [-5.25, -2.25]$

C. (a, ∞), where $a \in [-5.25, -1.5]$

D. $(-\infty, a)$, where $a \in [0.75, 6]$

E. None of the above.

---

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

$$\text{Less than 7 units from the number } -3.$$

A. $(-10, 4)$

B. $[-10, 4]$

C. $(-\infty, -10) \cup (4, \infty)$

D. $(-\infty, -10] \cup [4, \infty)$

E. None of the above
