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

$$-9 - 3x \leq \frac{-10x + 8}{5} < -6 - 4x$$

A. $(a, b],$ where $a \in [6.6, 12.6]$ and $b \in [1.8, 5.8]$

B. $[a, b),$ where $a \in [9.6, 13.6]$ and $b \in [-1.2, 8.8]$

C. $(-\infty, a] \cup (b, \infty),$ where $a \in [9.6, 13.6]$ and $b \in [-3.2, 4.8]$

D. $(-\infty, a) \cup [b, \infty),$ where $a \in [4.6, 11.6]$ and $b \in [0.8, 10.8]$

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 10 units from the number 6.

A. $(-\infty, 4] \cup [16, \infty)$

B. $(4, 16)$

C. $[4, 16]$

D. $(-\infty, 4) \cup (16, \infty)$

E. None of the above

---

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

$$-9x - 10 \leq 8x + 3$$

A. $(-\infty, a],$ where $a \in [0.4, 1.49]$

B. $(-\infty, a],$ where $a \in [-2.6, 0.46]$

C. $[a, \infty),$ where $a \in [-0.4, 3]$

D. $[a, \infty),$ where $a \in [-1.4, -0.1]$

E. None of the above.

---

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

$$-8 + 4x > 5x \text{ or } -4 + 5x < 7x$$

A. $(-\infty, a) \cup (b, \infty)$, where $a \in [-9, -5]$ and $b \in [-5, 2]$

B. $(-\infty, a] \cup [b, \infty)$, where $a \in [-2, 3]$ and $b \in [6, 10]$

C. $(-\infty, a] \cup [b, \infty)$, where $a \in [-10, -6]$ and $b \in [-6, 0]$

D. $(-\infty, a) \cup (b, \infty)$, where $a \in [2, 4]$ and $b \in [7, 11]$

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

---

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

$$\frac{5}{5} + \frac{4}{9}x \leq \frac{6}{6}x + \frac{10}{4}$$

A. $(-\infty, a]$, where $a \in [1.7, 3.7]$

B. $[a, \infty)$, where $a \in [2.7, 4.7]$

C. $(-\infty, a]$, where $a \in [-3.7, -0.7]$

D. $[a, \infty)$, where $a \in [-4.7, -1.7]$

E. None of the above.

---

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

$$4 + 3x < \frac{28x - 7}{3} \leq 8 + 8x$$

A. $(-\infty, a] \cup (b, \infty)$, where $a \in [1, 2]$ and $b \in [7.75, 9.75]$

B. $(a, b]$, where $a \in [0.5, 2]$ and $b \in [6.75, 10.75]$

C. $(-\infty, a) \cup [b, \infty)$, where $a \in [-0.6, 3.3]$ and $b \in [4.75, 11.75]$

D. $[a, b)$, where $a \in [0, 3.4]$ and $b \in [6.75, 10.75]$

E. None of the above.

---

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

$$-7x - 5 \leq 7x - 9$$

A. $[a, \infty)$, where $a \in [0.1, 0.4]$

B. $(-\infty, a]$, where $a \in [-0.92, -0.12]$

C. $[a, \infty)$, where $a \in [-1.4, 0]$

D. $(-\infty, a]$, where $a \in [0.07, 0.71]$

E. None of the above.

---

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

$$\frac{10}{8} + \frac{7}{5}x > \frac{8}{3}x - \frac{8}{6}$$

A. (a, ∞), where $a \in [1.04, 6.04]$

B. (a, ∞), where $a \in [-4.04, -0.04]$

C. $(-\infty, a)$, where $a \in [-2.04, -1.04]$

D. $(-\infty, a)$, where $a \in [1.04, 3.04]$

E. None of the above.

---

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

No more than 2 units from the number -10.

A. $(-\infty, -12) \cup (-8, \infty)$

B. $(-\infty, -12] \cup [-8, \infty)$

C. $(-12, -8)$

D. $[-12, -8]$

E. None of the above

---

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

$$6 + 9x > 12x \text{ or } 3 + 6x < 7x$$

A. $(-\infty, a) \cup (b, \infty)$, where $a \in [0, 3]$ and $b \in [-1, 7]$

B. $(-\infty, a] \cup [b, \infty)$, where $a \in [1, 5]$ and $b \in [2, 4]$

C. $(-\infty, a] \cup [b, \infty)$, where $a \in [-4, -2]$ and $b \in [-5, 1]$

D. $(-\infty, a) \cup (b, \infty)$, where $a \in [-4, 0]$ and $b \in [-6, 1]$

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