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

$$-6 + 6x > 9x \text{ or } 8 - 3x < 5x$$

A. $(-\infty, a) \cup (b, \infty)$, where $a \in [-1.31, -0.19]$ and $b \in [1.84, 2.65]$

B. $(-\infty, a] \cup [b, \infty)$, where $a \in [-2.3, -1.1]$ and $b \in [-0.43, 1.35]$

C. $(-\infty, a) \cup (b, \infty)$, where $a \in [-2.4, -1.81]$ and $b \in [0.59, 1.56]$

D. $(-\infty, a] \cup [b, \infty)$, where $a \in [-1.8, -0.2]$ and $b \in [1.13, 3.55]$

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

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

$$\frac{7}{3} + \frac{3}{2}x < \frac{5}{6}x - \frac{8}{4}$$

A. $(-\infty, a)$, where $a \in [-7, -5]$

B. $(-\infty, a)$, where $a \in [5, 7]$

C. (a, ∞), where $a \in [4, 9]$

D. (a, ∞), where $a \in [-8, -4]$

E. None of the above.

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

$$-4 + 4x < \frac{30x - 8}{7} \le -9 + 3x$$

A. $(-\infty, a) \cup [b, \infty)$, where $a \in [5, 11]$ and $b \in [1, 8]$

B. $(-\infty, a] \cup (b, \infty)$, where $a \in [9, 11]$ and $b \in [1, 7]$

C. $[a, b)$, where $a \in [9, 14]$ and $b \in [5, 7]$

D. $(a, b]$, where $a \in [8, 11]$ and $b \in [0, 13]$

E. None of the above.

4. 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 4.

A. $[-4, 12]$

B. $(-4, 12)$

C. $(-\infty, -4) \cup (12, \infty)$

D. $(-\infty, -4] \cup [12, \infty)$

E. None of the above

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

$$-8x + 5 < 7x + 6$$

A. (a, ∞), where $a \in [-0.05, 0.35]$

B. (a, ∞), where $a \in [-0.1, -0]$

C. $(-\infty, a)$, where $a \in [0.02, 0.08]$

D. $(-\infty, a)$, where $a \in [-0.17, -0.06]$

E. None of the above.