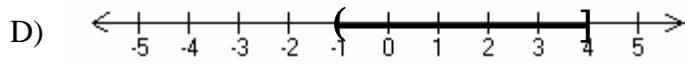
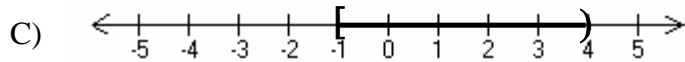
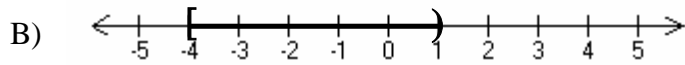
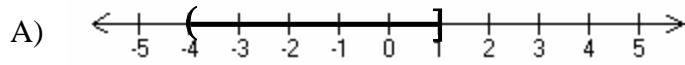
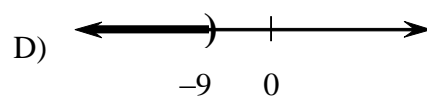
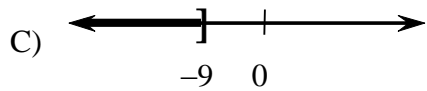
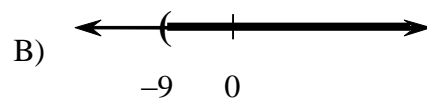
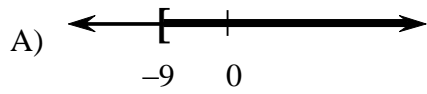


SHOW ALL WORK!

1. Graph the following inequality on a real number line: $-4 \leq x < 1$



2. Graph the following interval on a real number line. $(-9, \infty)$



3. Rewrite the following interval in inequality notation: $(-4, \infty)$

- A) $x > -4$ B) $x < -4$ C) $x \leq -4$ D) $x \geq -4$

4. For what real numbers x does the expression represent a real number?

$$\sqrt{x-3}$$

- A) All real numbers except $x = 3$ B) $x \leq 3$ C) $x > -3$ D) $x \geq 3$

5. Write as a single interval, if possible.

$$(-2, 4] \cap [0, 5)$$

- A) $(-2, 5)$ B) $[0, 4]$ C) $(-2, 4]$ D) $[0, 5)$

6. Solve the inequality. $-4 \leq 2x + 1 \leq 5$

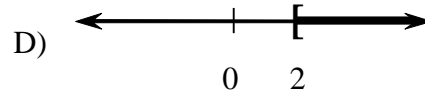
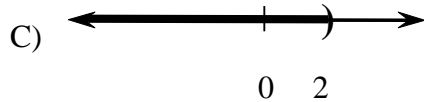
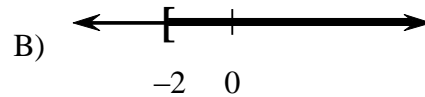
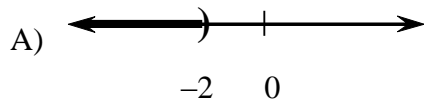
- A) $\frac{-7}{2} \leq x \leq 2$ B) $\frac{-7}{2} \leq x \leq -3$ C) $\frac{-5}{2} \leq x \leq -3$ D) $\frac{-5}{2} \leq x \leq 2$

7. Fill in the blanks with $>$ or $<$ to make the resulting statement true.

$$3 \text{ ______ } -10 \quad \text{and} \quad -6(3) \text{ ______ } -6(-10)$$

- A) $<, <$ B) $>, >$ C) $<, >$ D) $>, <$

8. Solve and graph. $3x - 2 \geq x + 2$



9. Write without absolute value signs. $|\sqrt{10} - 12|$

- A) $\sqrt{10} - 12$ B) $12 - \sqrt{10}$

10. Solve. $|x - 1| = 8$

- A) 9, 7 B) 9, -7 C) -9, -7 D) -9, 7

11. Solve. Write the solution in interval notation. $|x + 3| \leq 6$

- A) $(-\infty, -9) \cup (3, \infty)$ B) $(-\infty, -9] \cup [3, \infty)$ C) $(-9, 3)$ D) $[-9, 3]$

12. Solve. Write the solution in interval notation. $|x + 9| \geq 2$

- A) $(-\infty, -11) \cup (-7, \infty)$ B) $(-\infty, -11] \cup [-7, \infty)$
C) $(-11, -7)$ D) $[-11, -7]$

13. Solve. Write the answer in interval notation. $|12 - 5x| < 22$

- A) $(-\infty, -2) \cup \left(\frac{34}{5}, \infty\right)$ B) $\left(-\infty, \frac{-34}{5}\right) \cup (2, \infty)$
C) $\left(-2, \frac{34}{5}\right)$ D) $\left(\frac{-34}{5}, 2\right)$

14. Solve. $|2x + 11| = 7$

- A) $-2, -9$ B) $-2, 9$ C) $2, -9$ D) $2, 9$

15. Solve. $\sqrt{(2x-7)^2} < 11$

- A) $-2 < x < 9$ B) $x < 9$ or $x > -2$ C) $-9 < x < 2$ D) $x < -9$ or $x > 2$

Answer Key

1. B
2. B
3. A
4. D
5. B
6. D
7. D
8. D
9. B
10. B
11. D
12. B
13. C
14. A
15. A