

# Solving Multi-Step Inequalities Guide Notes

## SOLVING TWO-STEP INEQUALITIES

When solving inequalities that contain more than one operation, follow the order of operation

**Sample Problem 1:** Solve each inequality.

- A.  $3x - 6 > 9$
- B.  $2x - 5 \leq 11$
- C.  $8 - x < 13$
- D.  $-7x + 3 \geq 24$

## SOLVING MULTI-STEP INEQUALITIES

- A. **Use the Distributive property:** distribute then combine like terms then simplify

**Sample Problem 2:** Solve each inequality.

- A.  $3(x - 5) \geq 9$
- B.  $-4(5 - x) < 100$
- C.  $7(x - 1) - 2(x + 4) > 124$
- D.  $14x - 3(9x - 10) \leq 4$

- B. **Variables on both side of the inequality:** Gather the variables on one side and the Constants on the other side.

**Sample Problem 3:** Solve each inequality.

- A.  $3x - 5 > 5x - 2$
- B.  $-x + 7 \leq -2x + 4$
- C.  $2x + 10 \geq 7(x + 1)$
- D.  $-2x + 5 < 4(2x - 10)$

**Sample Problem 4:** Write, solve and graph each inequality.

- A. Three times a number minus eighteen is at least five times the number plus twenty.

