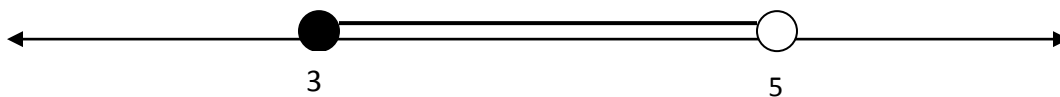




- \*17 questions
- \*Calculators allowed
- \*Show all work/steps- use separate paper
- \*Recommend time frame 30min -45min

### Concept of Inequalities

1. *True or False? Inequalities always have more than one number as a solution.*
2. *Describe the graph to the linear inequality:  $3 < x < 8$*
3. *When solving an inequality what happens to the inequality sign if you multiply both sides by a negative number?*
4. *Write an inequality to translate "the car will cost at least \$25,000."*
5. *Write an inequality to translate "his age is somewhere between 60 and 70."*
6. *Is  $-9$  a solution to the inequality  $x < -10$ ?*
7. *Write the inequality that goes with this graph:*



Solving and Graphing Linear Inequalities

Directions: solve and graph the following linear inequalities.

8.  $4x < 12$

9.  $-3x \geq 9$

10.  $-x + 5 > -10x - 7$

11.  $3(x - 1) \leq -15$

12.  $10 < 2x \leq 12$

13.  $1 \leq 2(x + 3) \leq x - 4$

14.  $-5(3x + 1) > (x - 2)$

Linear Inequalities in Two Variables

15. *Is  $(-1, 5)$  in the solution set for the linear inequality  $2x + 3y < 10$ ?*

Directions: solve and graph the following linear inequalities.

16.  $4x + y \leq 8$

17.  $y < 3x - 9$