

Algebra 1  
Unit 3, Lesson 2 Notes  
Solving Inequalities with Variables on Both Sides

## **Solving and Graphing Inequalities in One Variable**

### The Golden Rule of Inequalities

1.

2.

3.

4.

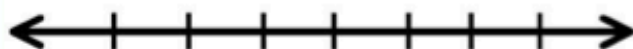
5.

Open Circle

Closed Circle

Example: Solve and Graph

$$5 - 3x \leq 13 + x$$



Examples: Solve and graph.

1)  $4 - 2m > 7 - 3m$

2)  $-10p > 6p - 8$

3)  $8n - 2 > 17n + 9$

4)  $-\frac{2}{3}d - 2 < \frac{1}{3}d + 8$

5)  $3(S - 4) \geq 2(S - 6)$

What about these? Solve and graph if possible.

$-6(1 + 7x) + 7(1 + 6x) \leq -2$	$-2(5 + 6x) < 6(8 - 2x)$
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A few more...

1)  $3p - 5 > 2p + p - 7$

2)  $6(x + 3) < 5x + 18 + x$