

Solving and Graphing Inequalities Notebook Pages

3/10

$>$ open circle
 $<$ open circle

\geq closed circle
 \leq closed circle

* if line under the symbol means closed circle

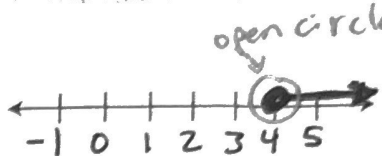
Describe the meaning of the following symbols:

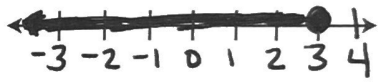
$>$ Greater than

\geq Greater than or equal to

$<$ Less than

\leq Less than or equal to

Copy and solve the inequality (show your work)	Label and graph the solutions to the inequality.
$x + 3 > 7$ $\xrightarrow{-3}$ $x > 4$	
$x + 3 > 7$	
Choose a number from the solutions on the graph to substitute and check.	Explain the solutions in words.
choose any number to the left of 4 and plug into inequality. $5 + 3 > 7$ $8 > 7 \checkmark$	Any number larger than 4 makes it (inequality) true

Copy and solve the inequality (show your work)	Label and graph the solutions to the inequality.
$4m \leq 12$ $\xrightarrow{\div 4}$ $m \leq 3$	
$4m \leq 12$	
Choose a number from the solutions on the graph to substitute and check.	Explain the solutions in words.
$4 \cdot -2 < 12$ $-8 < 12 \checkmark$	Any number including 3 makes the inequality true.

* Most (not all) times draw line in middle of sign. The "arrow" tells you which way to shade.



Solving and Graphing
One-Step Inequalities

Name _____ Date _____

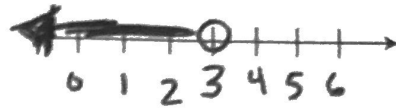
Copy and solve the inequality (show your work).

$$x + 5 < 8$$

$$\quad \quad \quad \curvearrowright -5$$

$$x < 3$$

Label and graph the solutions to the inequality.



Choose a number from the solutions on the graph to substitute and check.

$$1 + 5 < 8$$

$$6 < 8 \checkmark$$

$$x + 5 < 8$$

Explain the solutions in words.

Any number less than 3 makes the inequality true.

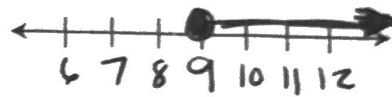
Copy and solve the inequality (show your work).

$$y + 2 \geq 11$$

$$\quad \quad \quad \curvearrowright -2$$

$$y \geq 9$$

Label and graph the solutions to the inequality.



Choose a number from the solutions on the graph to substitute and check.

$$y + 2 \geq 11$$

$$10 + 2 \geq 11$$

$$12 \geq 11 \checkmark$$

$$y + 2 \geq 11$$

Explain the solutions in words.

Any number ~~less~~ 9 or less makes inequality true.

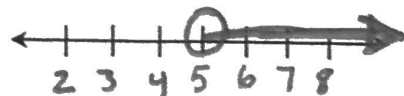
Copy and solve the inequality (show your work).

$$4m > 20$$

$$\quad \quad \quad \curvearrowright \div 4$$

$$m > 5$$

Label and graph the solutions to the inequality.



Choose a number from the solutions on the graph to substitute and check.

$$4 \cdot 6 > 20$$

$$24 > 20 \checkmark$$

$$4m > 20$$

Explain the solutions in words.

Any number greater than 5 works to make inequality true.