

# Notes Key

## Graphing Inequalities

List the numbers that would be a solution for each inequality.

- $x - 3 > 4$  "x" could be equal to anything over 7
- $m + 2 \geq 7$  "m" could be equal to anything over 5 or 5
- $n + 1 = 4$  "n" could be equal to only 3

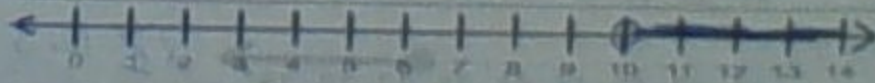
Use the graphic organizer to contrast equations and inequalities.

	Equation	Inequality
Example	$x + 5 = 6$ $x = 1$	$x + 5 \geq 6$ $x = 1$ or higher
Number of solutions	1 solution	many solutions

Write an inequality for each sentence then graph.

- You must be at least 10 years old to ride the go-karts.

Words	Your age	at least	10
Variable	let $a$ = your age		
Inequality	$a$	$\geq$	10

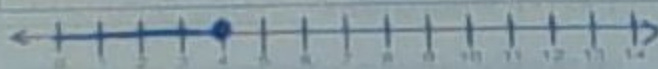


- You must be at least 16 years old to have a driver's license.

Words	Your age	is at least	16
Variable	let $a$ = your age		

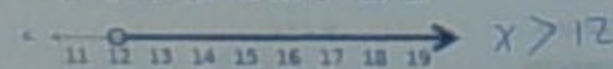
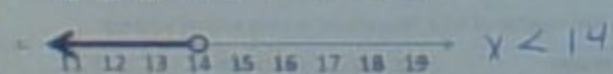
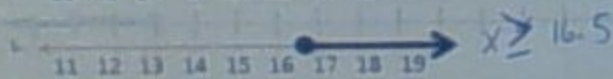
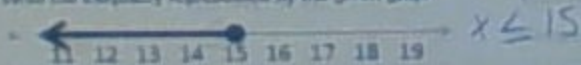
5. A pony is less than 4 feet tall.

Words	A pony	is less than	4
Variable	let $p$ = the height of the pony		
Inequality	$p < 4$		

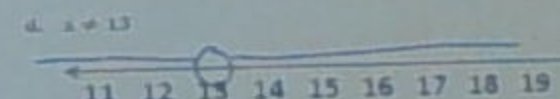
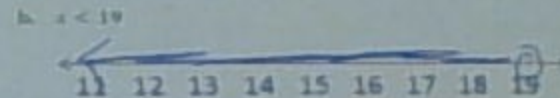
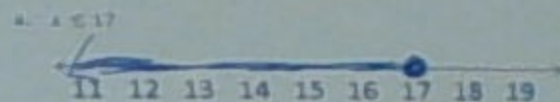


Open Circle	Closed Circle
The number <u>15</u> is <u>not</u> included in the solution.	The number <u>15</u> is included in the solution.
$<$ $>$ 	$\leq$ $\geq$ 

Write the inequality represented by the given graph.



Graph the solution set for each inequality.



Try graphing these.

