Name: _____ One-step, Single Variable

Introduction to Inequalities

An inequality is a pair of expressions or numbers that are not equal.

You can use these signs to express an inequality:

>	*greater than*	≥	*greater than or equal to*
<	*less than*	≤	*less than or equal to*

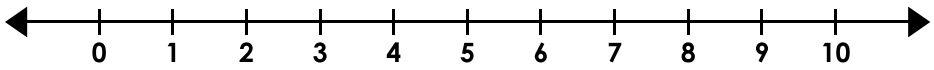
When you solve an inequality, you need to show all of the values that make the statement true. One way to do this is by graphing the inequality on a number line. First, you must isolate the variable on one side of the inequality.

example: **x - 6 ≤ 7** (x minus 6 is less than or equal to 7)

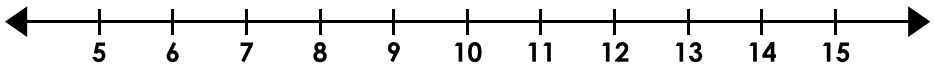
+6 +6

x ≤ 13 (x is less than or equal to 13)

1. $a + 7 \geq 9$



2. $24 > 2q$



3. $t - 2 \leq 17$

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Introduction to Inequalities

4. $\frac{x}{4} < 8$

5. $80 > 4v$

6. $n + 20 \geq 90$

9. For the inequality $5k > 100$, Keegan says 20 and 100 are both solutions. Is he correct? Explain why or why not.

_____

_____

10. Juanita says both 0 and 1 are solutions for the inequality $u + 5 \leq 6$. Is she correct? Explain why or why not.

_____

_____

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Introduction to Inequalities

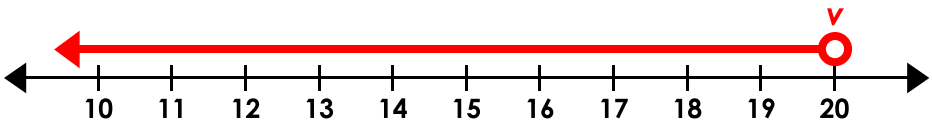
4. $\frac{x}{4} < 8$

$\times 4 \quad \times 4$

$x < 32$

5. $\frac{80}{4} > \frac{4v}{4}$

$20 > v$



1. Therefore, both 4 and 8 would make the inequality true.