

Name: _____ Per _____
Mrs. Doolan/Math6

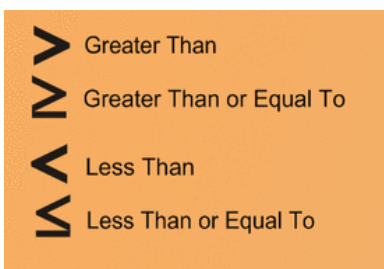
EE8: Solutions of Inequalities

Objective: To understand what an inequality is, how to graph them and how to write them from real world stories.

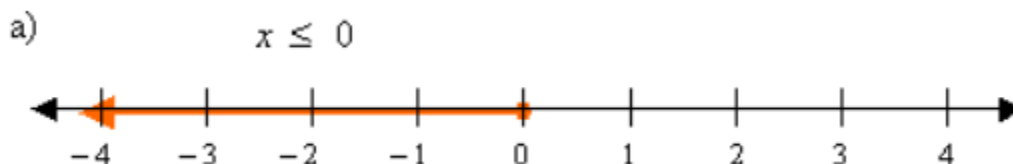
Inequality: A math sentence that compares two expressions which are less than, greater than or equal to, each other. An inequality uses symbols such as $<$, \leq , $>$, \geq or \neq to compare two quantities.

Symbols:

\leq \geq



Visual Examples:

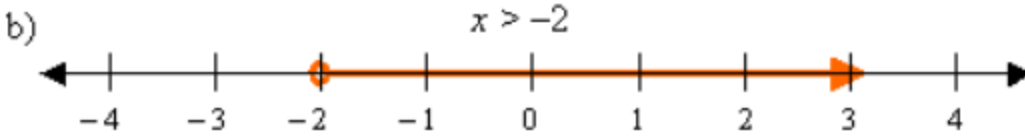


The solid circle shows 0 and all values less than 0 are solutions to $x \leq 0$.

Essential questions: is the end point open or closed? _____

Why? _____

What does the arrow show? _____

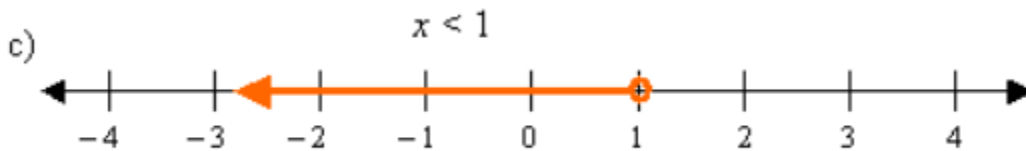


The open circle shows -2 is not a solution to $x > -2$, but all values greater than -2 are.

Essential questions: is the end point open or closed? _____

Why? _____

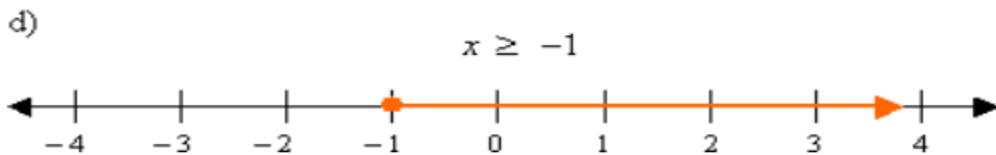
What does the arrow show? _____



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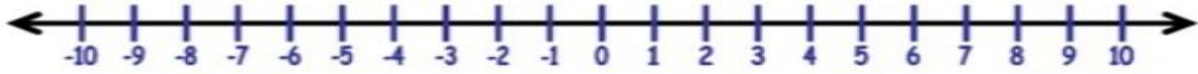
What does the arrow show? _____



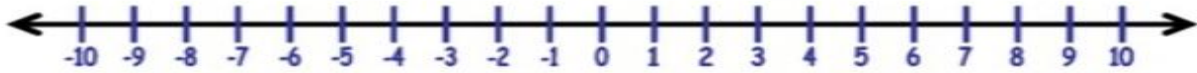
YOU TRY:

Graph each inequality:

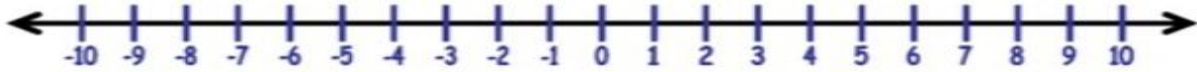
1. $x < 8$



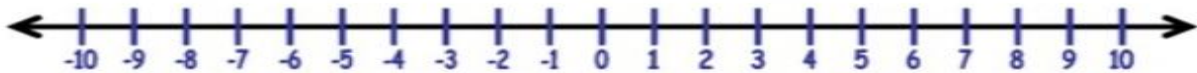
2. $y \geq -6$



3. $z > 1$



4. $w \leq -3$



Excellent! Now let's write some inequalities:

Example #1: Jake sold at least 24 calendar raffles for his school play fundraiser:



To write an inequality from a story sentence:

1. Find the “anchor” number: 24
2. Assign the variable to the unknown in the story: r is for raffles
3. Determine if the variable can be equal to or just less than/greater than the anchor number: yes, equal to or greater than
4. Write the inequality with the correct symbol: $r \geq 24$



YOU TRY:



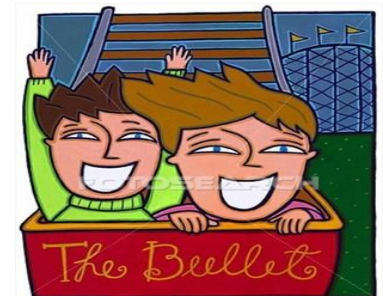
1. Mrs. Doolan has taught more than 10 years at Blake MS.

2. Jamie runs at least 3.5 miles four times a week.

3. Stevie read more than 8 books over the summer break.

4. The 2014 “Diabetes Dodgeball Tournament” at Blake earned at least \$266.

5. All riders must be at least 48 inches to get on the roller coaster.



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