Over or Under?

Writing x > c and x < c for real rules

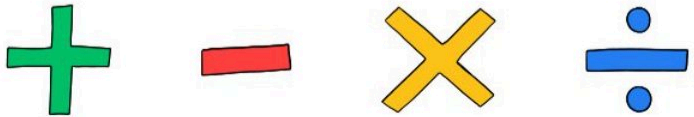
Created with LessonDino.com · AI lesson planner with checkable sources

DID YOU KNOW?

One inequality can have forever many answers.

For $x < 5$, numbers keep going left — you can never list them all.





Created with LessonDino.com · AI lesson planner with checkable sources

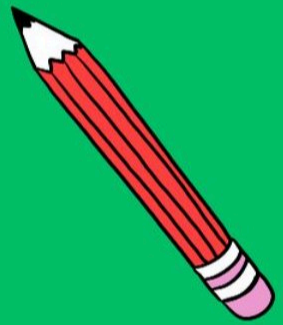
$a^2+b^2=c^2$

Inequalities in One Picture

- > means greater than
- x holds unknown amount
- Infinite numbers can fit

Inequality

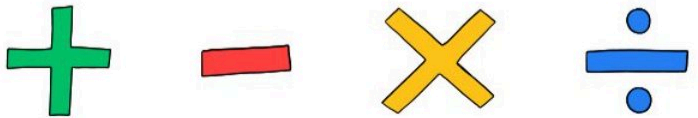
- < means less than
- c is the limit number
- Graph shows all at once



Created with LessonDino.com · AI lesson planner with checkable sources

Write It Like This

1. Find limit words: more than, less than
2. Let x stand for the unknown amount
3. Pick > for more, < for less
4. Write x > c or x < c with limit



Created with LessonDino.com · AI lesson planner with checkable sources

$a^2+b^2=c^2$

Think, pair, share

A water slide needs riders to be over 48 in tall. What inequality with h shows who can ride?





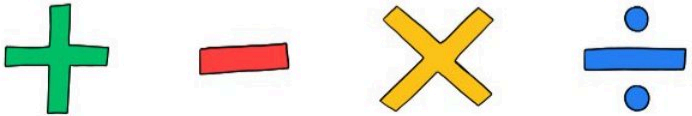
Created with LessonDino.com · AI lesson planner with checkable sources

Watch: Words to Symbols



▶ 4:00 – 9:00

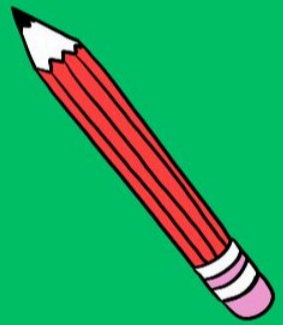
- Spot how they turn words into x > c
- Listen for why answers never end



$a^2+b^2=c^2$

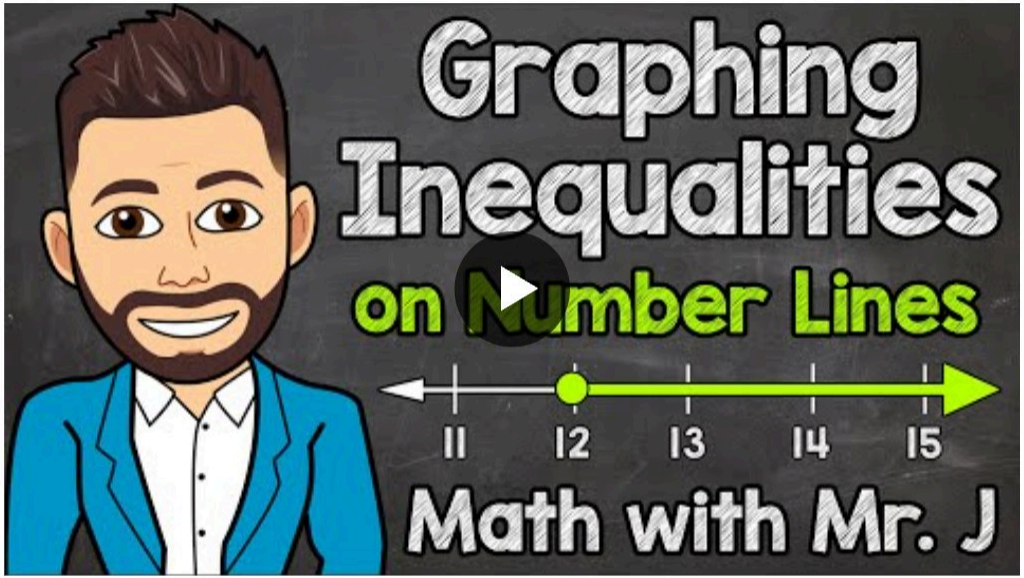
BIG IDEA

One inequality can describe every number that follows a rule.



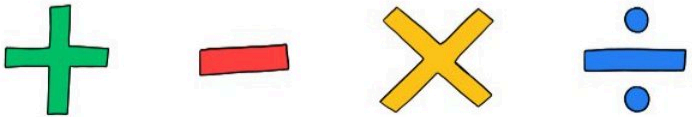
Created with LessonDino.com · AI lesson planner with checkable sources

Watch: Graphing on a Line



▶ 0:00 – 5:36

- Watch where they put the open circle
- See which way the arrow points



$a^2+b^2=c^2$

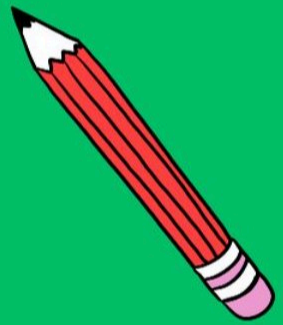
Your task

In pairs, write an inequality for each rule and sketch it on a number line.

1. Rule A: backpack must weigh less than 15 lb. Write x ?
2. Rule B: you need more than $20 to buy a game. Write y ?
3. Graph both with open circle and arrow. Test 2 numbers each.

10 min

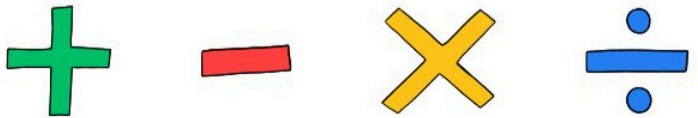
In pairs



Created with LessonDino.com · AI lesson planner with checkable sources

Rule to Graph

Park rule: speed must be less than 15 mph → Math: let s = speed, so s < 15 → Try it: 14, 10, even 0 all work → Picture: open circle at 15, arrow left



$a^2+b^2=c^2$

What could this be?

This picture shows an open circle at 5 with an arrow to bigger numbers. What rule is hiding?

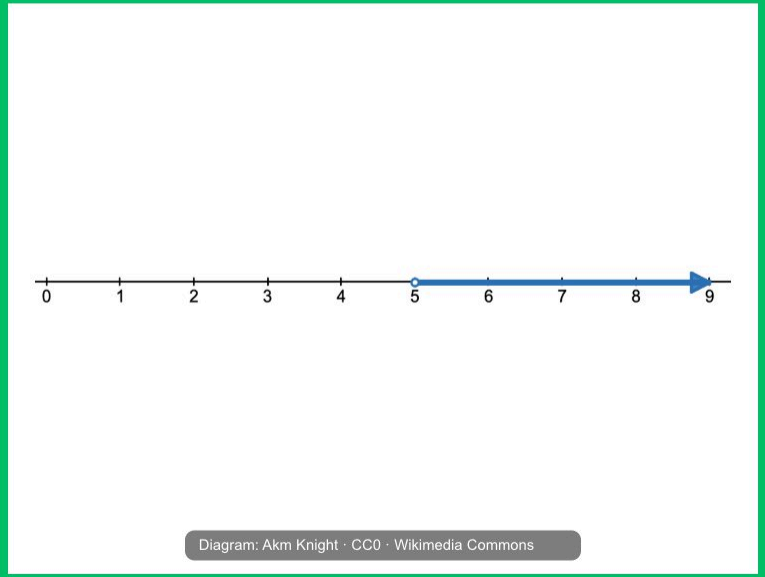


Diagram: Akm Knight · CC0 · Wikimedia Commons



Created with LessonDino.com · AI lesson planner with checkable sources

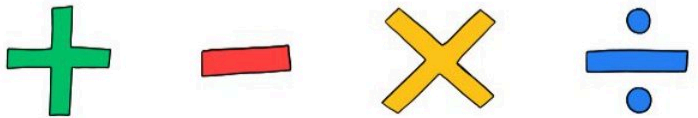
True or false?

$x > 3$ means x can be 4, 5, and 100.

$x < 2$ has only a few solutions.

For $x < 7$, graph an open circle at 7 with arrow left.

$x > c$ and $x = c$ have the same solutions.



Created with LessonDino.com · AI lesson planner with checkable sources