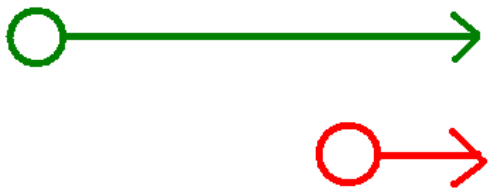
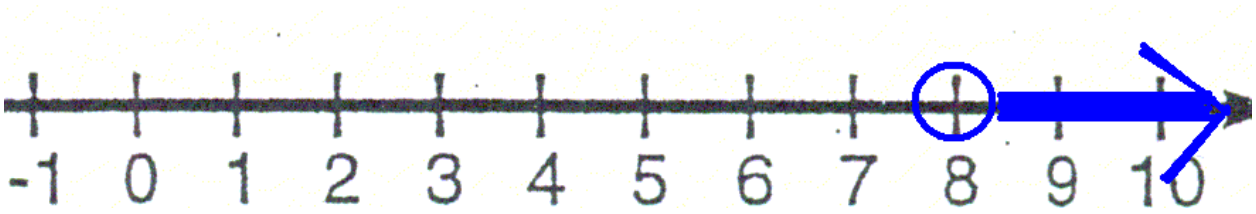
What happens when you have a conjunction (with "AND") and both inequalities go the same direction?

$x > 5$ AND $x > 8$

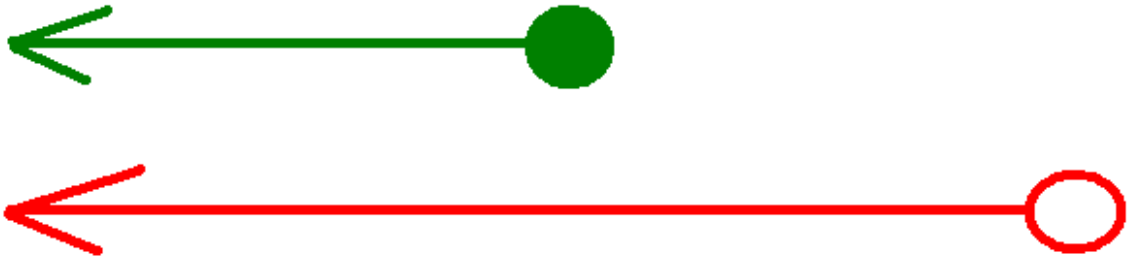


Where are they BOTH true?

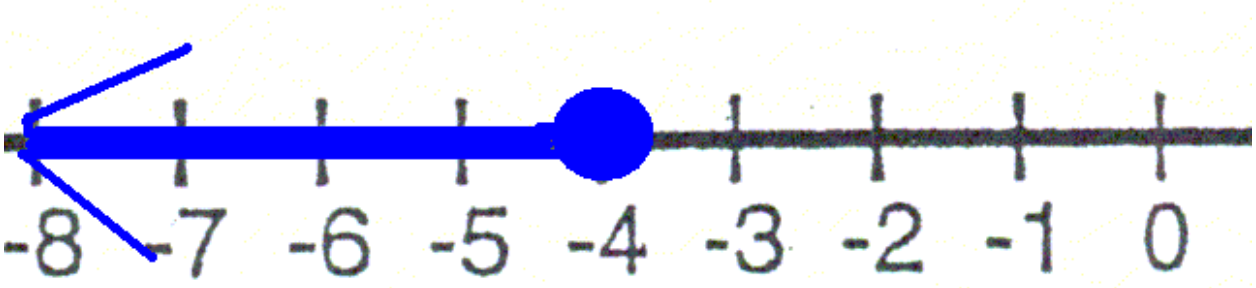


The actual answer is $x > 8$.

$x \leq -4$ AND $x < 0$



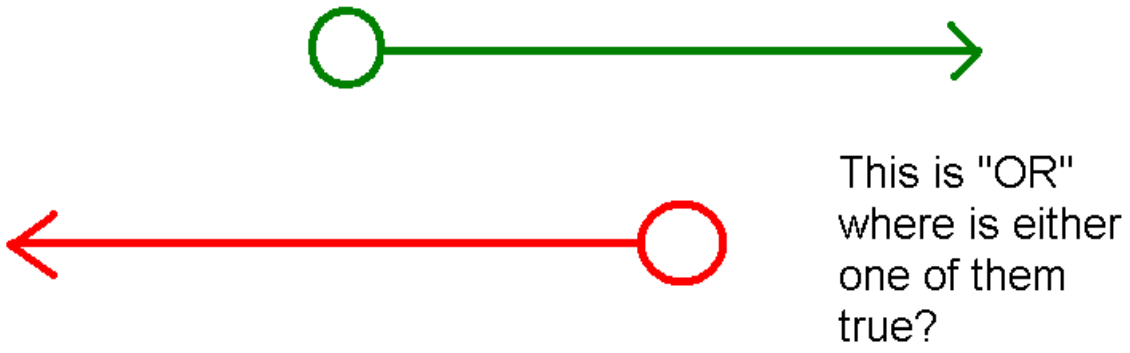
Where are they
BOTH true?

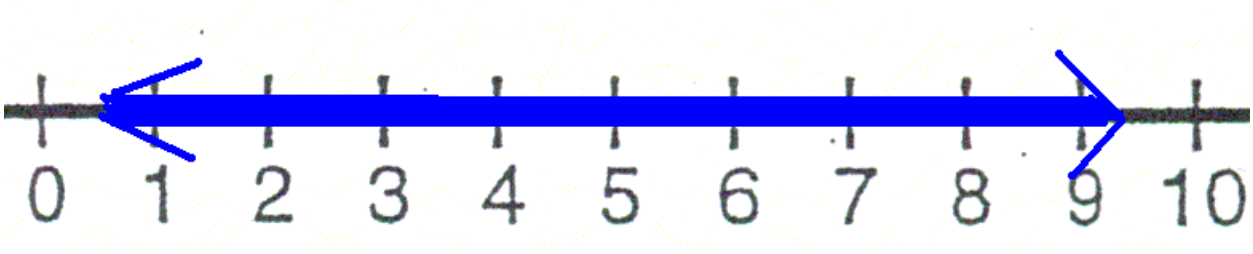


The actual answer is $\boldsymbol{x \leq 4}$.

What might happen with a disjunction ("OR")?

$x > 3$ OR $x < 6$

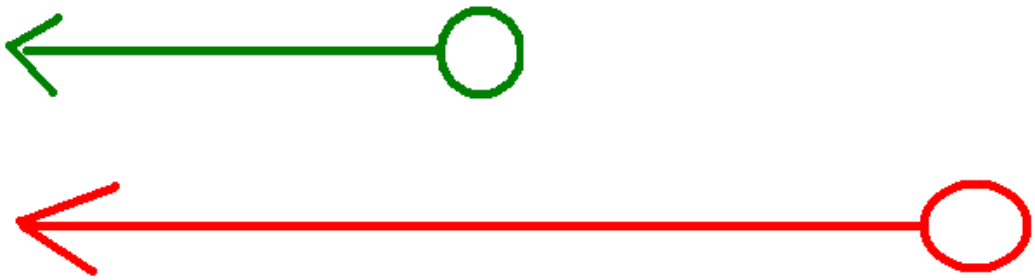




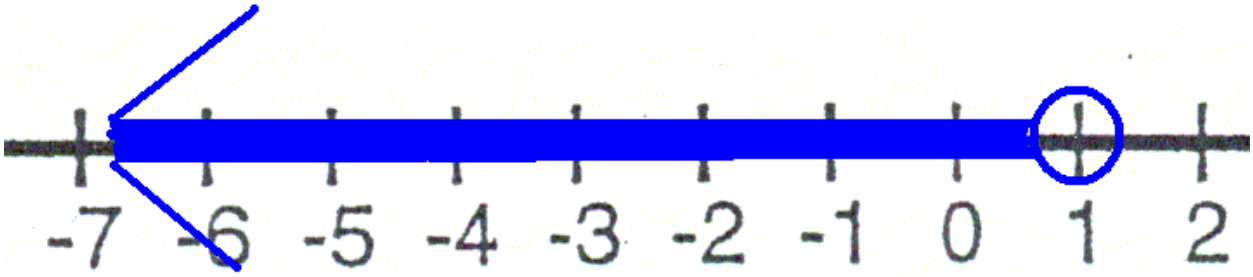
At least one of them (red or green) is true EVERYWHERE, so the solution is **ALL REAL NUMBERS**.

Here's another disjunction ("OR").

$x < -3$ OR $x < 1$



Where is EITHER ONE of these true?



The actual solution is $\boldsymbol{x < 1}$.