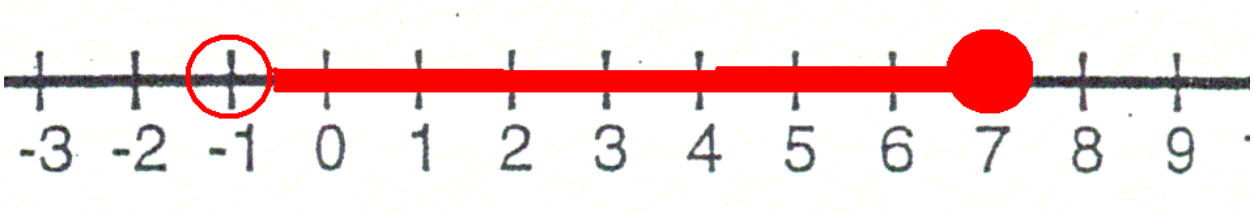
Conjunctions ("AND")

$$-5 < 3x - 2 \leq 19$$

Our goal is to get the variable alone in the middle of the sANDwich. We will do the same mathematical operations to all three parts.

$$\begin{array}{c} -5 < 3x - 2 \leq 19 \\ +2 \qquad +2 \;\; +2 \\ -3 < \quad 3x \quad \leq 21 \\ \div 3 \;\; < \div 3 \leq \;\; \div 3 \\ -\mathbf{1} < x \leq 7 \end{array}$$

We will graph between -1 and 7 (including 7)



If you get an answer with "greater than" symbols ($8 > x > -3$), reverse your answer so it has "less than" symbols ($-3 < x < 8$). That way your solution goes from least to greatest as you read from left to right (just like the number line).

Disjunctions ("OR")

$$8 < 2x \quad or \quad 3x + 1 < -5$$

Solve each of these inequalities separately and then graph them. Wherever either one of them is true, you have a winner!

$$8 < 2x \quad or \quad 3x + 1 < -5$$
$$4 < x \quad or \quad 3x < -6$$
$$x > 4 \quad or \quad x < -2$$