

Inequations work just like equations, except the sides aren't balanced.

Instead of equals, there are four symbols.

Greater than, Less than, Greater than or equal to and Less than or equal to

Six is greater than four.

Four is less than nine.

Nine is less than or equal to ten and greater than or equal to nine.

Solving inequations works just like solving equations.

Let's say there are two gyms.

One charges a joining fee of £100 and a monthly fee of £50.

The second charges a joining fee of £50 and a monthly fee of £100.

If planning to use the gym for more than x months, which gym is the better deal?

Expressing months as X , this can be written as:

$$100 + 50x \text{ is less than } 50 + 100x$$

To simplify the inequality, first subtract 50 from both sides. Then subtract $50x$ from both sides. Divide each side by 50 to reach $1 \text{ is less than } x$.

Or, x is greater than 1.

So if x is 2 months, then Gym 1 is 200 and Gym 2 is 250, so Gym 1 is cheaper if you join for more than 1 month.

Let's join that one!