First, watch the video: https://www.youtube.com/watch?v=GMqrOdCx4Yg

Here are examples of two research studies testing the efficacy of drug X (intended to lower cholesterol).

Study 1

A medical centre has around 1000 patients with high cholesterol. The doctors at this centre prescribe drug X to 500 of these patients. They tell the patients that this drug is likely to lower their cholesterol. Over a two year period, they measure the cholesterol levels of both the patients taking drug X and the patients who are not taking any cholesterol-lowering medication. In the end, they find that the patients who took drug X have, on average, lower cholesterol levels: **around 15% lower** than those patients who did not take the drug.

Study 2

A clinic also has 1000 patients with high cholesterol. They prescribe drug X to 500 of them and a sugar pill to the other 500. The doctor and researcher are aware which patients have received the 'real' medicine and which have received the sugar pills, but the patients themselves are not aware of this. Over a two year period, the clinic measures cholesterol levels of patients taking drug X and those taking the sugar pills. In the end, they find that the patients who took drug X have, on average, lower cholesterol levels: **around 5% lower** than those patients who did not take the drug.

Why did the two medical facilities see such different results? Which is likely to be the more 'correct' number? Would you be confident that this was an accurate result? Why or why not?