



ICAEW Excel TREND

In this video, I'm going to talk to you about the TREND function in Excel. Now, to understand the TREND function, you need to imagine we've got two sets of variables that are somehow related to each other - the X's and the Y's. The X's and Y's are related to each other, so we could potentially, if we plotted them on a graph, we could create a straight line, a line of best fit, to imagine how X is related to Y.

TREND, what TREND does is it takes the known X's and the known Y's, and therefore develops a pattern, develops that line of best fit and then it will take a new X, in other words, we want to know the Y for this particular new X.

Best illustrated with this with a simple example like this.

So here we've got monthly rainfall in millimetres compared to number of umbrellas sold. Clearly, as the rainfall increases, we would expect the number of umbrellas sold to also increase. So we've got our known X's here and known Y's, and what we're looking for is, we're looking for the numbers of umbrellas that we might hope to sell if the monthly rainfall was 50 millimetres. Notice, 50 is not in this list, so it's difficult for us to tell what Excel will do. It will interpolate that data and it will provide us with the Y that best fits the X of 50.

Let me illustrate. Equals TREND, it's very simple the way it works, equals TREND, open brackets. So known Y's, known X's, new X's. So our known Y's would be the number of umbrellas sold. Comma. Our known X's would be the monthly rainfall. Comma. And then the new X, the X for which we want the Y for, is the 50 down here.

Now, we have a fourth argument here which is constant. Usually you will be leaving this out, you will be ignoring it. If you ignore it. This is actually a binary entry, either true or false. If you enter true or leave it out, then the constant, in other words, the intercept on the Y axis, will just be calculated as per the line of best fit, and you don't need to do anything about it, and that will be the end of it. If, for whatever reason, you want to set that constant, that intercept on the Y axis, on the vertical axis, to be equal to zero, then here you would enter the argument false. As I say, 99% of the time you will not need this, you just close your bracket at this point, and then Excel will do the rest for you, which is what I'm going to do now, close my brackets. I'm just going to hit enter and there you go.

So, in a month where 50 millimetres of rainfall falls, we would expect approximately 3,487 umbrellas to be sold. Equals TREND - it will calculate new Y's based on known X's, known Y's and a new X.