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This tutorial talks about percentiles. A percentile is the data value that is greater than or equal to that percent of values. For example, the 80th percentile is the data value that is greater than or equal to 80% of the data. Every data value can be expressed with a percentile. Let's go through an example.

When you're calculating a percentile, first, you need to select a value that you're looking at. Then, you need to count all the values less than or equal to that value. And then, finally, divide by the total number of values. For example, here we have a set of data that shows the test scores for a number of students.

Now, let's imagine you are a student who scored a 79. So this is your score. And you want to know what percentile you end up being in. So first, we've selected our value, the 79. Now, we need to count all of the values less than or equal to it. So we have 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22 values that are less than it.

And then, we're also including the values that are equal to it. So 23 and 24. And we're going to include our own value in this. So we have 24 values that are less than or equal to our selected value, that's 79.

Now, we need to divide by the total number of values. We need to know how many values total. So we had 24 up to here. 25, 26, 27, 28, 29, 30, 31. So we have 31 values total. So when we do 24 divided by 31, we're going to get what percent of the data we are greater than or equal to. So what percent of the data are less than or equal to our number.

So when we type that into a calculator, we get 0.7741. So we can just round to 0.77. Now, to turn that to a percent, we're going to multiply by 100. So 77%. So if we have 77% of the values that are less than or equal to our value, we end up being in the 77th percentile.

So that's our example of how to calculate a percentile. Now, this is typically done with test scores and, in particular, things like IQ or SATs, ACTs, but you can calculate the percentile for pretty much any set of data. This has been your tutorial on percentiles.