Mathematics – Advanced
Pareto charts transcript

(Duration 3:02)

This is the HSC Hub, Mathematics curriculum support for the New South Wales Department of Education. My name is Jackie Blue. This question is from the NESA mathematics advanced sample HSC examination. It is multiple choice question five about Pareto Charts.

We acknowledge that there may be different approaches, methods or techniques to answering this question. We encourage you to discuss and share these with each other. Please click pause to read through the question and then we'll go through the solution together.

So let's begin by saying that any Pareto chart is a combination of a column graph and a line graph. The column graph is presented in descending order. The line graph represents the cumulative percentage of each option.

So here we have the reasons that students have arrived late to school. The most popular reason is that they slept in. The least popular reason is that the car broke down. We read the raw number of late arrivals using the columns on the left hand axes. We read the cumulative percentages using the line graph on the right hand axes. So we can see that a train or bus delay is one of the shorter columns, so Part D ninety two percent can be eliminated straight away and we call this a distractor. It's there because the cumulative percentage of a train or bus delay is in fact ninety two percent.

So let's begin there at ninety two percent. and let's look at the column to the left of it. The cumulative percentage for the reason 'appointment' is eighty six percent. So the answer we're looking for is actually the difference between these two values. The difference between them is six, so the correct answer is A. Six percent

Let's quickly talk about the other distractors. Option B comes from reading the column graph height on the percentages side of the chart. It sits at fifteen percent, but we know that we read the column total from the left hand side. Option C comes from reading the column graph height from the raw number of students, which is in fact thirty but it is thirty students, not 30%. Once again, the correct answer is A, 6%.

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End Transcript