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EDG500: Educational Research and Statistics

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Video 3 Histograms

1. The video opens by describing a study of lightning strikes in Colorado. What variable does the first histogram display?

The variable displayed in the first histogram in the video is the time of day of the first strike or flash of lightning.

2. In this lightning histogram, what does the horizontal scale represent? What does the vertical scale represent?

In this lightning histogram, the horizontal scale represents the hour of the first lightning flash, represented by each bar measuring one hour. The vertical represents the percentage of days that had their first lightning flash within that hour.

3. Was the overall shape of this histogram symmetric, skewed, or neither?

The overall shape of the histogram was roughly symmetrical around the tallest bar.

4. Why were a few values in the second lightning histogram called outliers?

They were the number of maximum flashes of lightning that stood out from the overall distribution and demanded inquiry for an explanation.

5. When you choose the classes for a histogram, what property must the classes have if the histogram is to be correct?

When choosing the classes for a histogram, the best size of the interval along the horizontal axis is the key property to calibrate to analyze the data appropriately.

6. What happens to a histogram if you use too many classes? What happens if you use too few?

If too many classes are used in the histogram, it is too difficult to focus on the intervals, and it becomes less informative. Too few classes are not as informative as they create a histogram that is too general to analyze the data accurately and more specifically.