Geography Practical
Coefficient of Variation (CV)

The coefficient of variation (CV) is a statistical measure used to assess the relative variability or dispersion of data points in a dataset, particularly when comparing datasets with different units or scales.

It is calculated as the ratio of the standard deviation to the mean, expressed as a percentage. The formula is:

$$CV\ (\%) = \left(\frac{Standard\ deviation}{Mean} \right) \times 100$$

Essentially, the CV provides a standardized measure of variability, allowing for comparisons between datasets with different means and units.

A lower CV indicates less variability relative to the mean, while a higher CV suggests greater variability.

Geography Practical
Coefficient of Variation (CV)

The CV is particularly useful in fields such as disaster risk management, where it can help assess risk of flood or drought, and in biology or engineering, where it can indicate the reliability or consistency of experimental results.

It's important to note that the CV is sensitive to outliers; extreme values can disproportionately influence its calculation.

Interpretation of the CV depends on the context; for instance, in case of flood or drought analysis, a higher CV may indicate risk of drought or drought, while a lower CV may suggest consistency in rainfall.

Overall, the coefficient of variation serves as a valuable tool for comparing the variability of datasets with different means, providing insights into the relative stability or dispersion of the data.

Geography Practical
Coefficient of Variation (CV)

Coefficient of Variation (CV)

$$\frac{\sigma}{\mu} \times 100$$

Standard Deviation

$$\sigma = \sqrt{\frac{\sum(x_i - \mu)^2}{N}}$$