Exploring One-Variable Data

AP Statistics · Vocabulary in context

Word	Example
Statistics /stəˈtɪstɪks/	**Statistics** is the science of collecting and studying data.
data /ˈdeɪtə/	We collected **data** on the heights of 30 students. 30
variation /ˌveərɪˈeɪʃn/	People's heights show **variation**.
parameter /pəˈræmɪtə/	In $x = 2t$ and $y = t^2$, t is the **parameter**. $x = 2t$ $y = t^2$ t
statistic /stəˈtɪstɪk/	A **statistic** is a number worked out from a sample, such as a sample mean.
descriptive statistics /dɪˈskrɪptɪv stəˈtɪstɪks/	**Descriptive statistics** summarise data with numbers and graphs.
inferential statistics /ɪnfəˈrenʃl stəˈtɪstɪks/	**Inferential statistics** use a sample to draw conclusions about a population.
variable /ˈveərɪəbl/	A **variable** stores a value that can change.
Categorical /ˌkætɪˈgɒrɪkl/	**Categorical** data puts things into groups, like eye colour.
Quantitative /ˈkwɒntɪteɪtɪv/	**Quantitative** data uses numbers, like height.
frequency table /ˈfri:kwənsi ˈteɪbl/	A **frequency table** counts how often each value appears.
relative frequency /ˈrelətɪv ˈfri:kwənsi/	The **relative frequency** is the count divided by the total.

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proportion /prəˈpɔ:ʃn/	The **proportion** of students who walk to school is 0.4. 0.4
Bar charts /bɑ: tʃɑ:ts/	**Bar charts** show categorical data.
side-by-side bar graph	A **side-by-side bar graph** compares groups next to each other.
segmented bar graph	A **segmented bar graph** splits each bar into parts.
dotplot /ˈdɒtplɒt/	A **dotplot** shows each value as a dot above a number line.
stem-and-leaf plot /stem ænd li:f plɒt/	A **stem-and-leaf plot** shows every data value.
histogram /ˈhɪstəgræm/	Draw a **histogram** with the bars touching.
distribution /ˌdɪstrɪˈbju:ʃn/	The **distribution** shows what values occur and how often.
discrete /dɪˈskri:t/	The number of children is **discrete**: you can count it.
continuous /kənˈtɪnju:əs/	The beta particles have a **continuous** range of energies. β
Shape /ʃeɪp/	**Shape** describes whether a graph is symmetric or skewed.
skewed /skju:d/	The data are **skewed** to the right, with a long tail of high values.
unimodal /ˌʌnɪˈmɒdl/	A **unimodal** graph has one peak.
bimodal /baɪˈmɒdl/	A **bimodal** graph has two peaks.

Word	Example
uniform /ˈjuːnɪfɔːm/	The weight of a **uniform** rod acts at its middle.
Outliers /ˈaʊtlaɪəz/	**Outliers** are values far from the rest.
mean /miːn/	The **mean** delivery time is 27 minutes. 27
median /ˈmiːdiːən/	Put the values in order before you find the **median**.
interquartile range /ˌɪntəˈkwɔːtaɪl reɪndʒ/	Subtract the lower quartile from the upper for the **interquartile range**.
standard deviation /ˈstændəd ˌdiːvɪˈeɪʃn/	A larger **standard deviation** means the values are more spread out.
variance /ˈveərɪəns/	The **variance** is the square of the standard deviation.
five-number summary /faɪv ˈnʌmbə ˈsʌməri/	The **five-number summary** is the minimum, Q1, median, Q3 and maximum. 、Q1、 、Q3
percentile /pəˈsentaɪl/	Scoring at the 90th **percentile** means you beat 90% of people. 90th 90%
cumulative relative frequency graph /ˈkjuːmjʊlətɪv ˈrelətɪv ˈfriːkwənsi græf/	A **cumulative relative frequency graph** shows the percent at or below each value.
boxplot /ˈbɒksplɒt/	A **boxplot** shows the five-number summary.
normal distribution /ˈnɔːml ˌdɪstrɪˈbjuːʃn/	A **normal distribution** has a symmetric bell-shaped density curve.
empirical rule /emˈpɪrɪkl ruːl/	The **empirical rule** says about 95% of values are within two standard deviations. 95%

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Word	Example
z-score /zed skɔː/	A **z-score** tells how many standard deviations a value is from the mean.