Sampling Distributions

AP Statistics · Vocabulary in context

Word	Example
statistic /stə'tɪstɪk/	A **statistic** is a number worked out from a sample, such as a sample mean.
sample mean /'sæmpl mi:n/	The **sample mean** is the average of the sample.
sample proportion /'sæmpl prə'pɔ:ʃn/	The **sample proportion** is the fraction of the sample with the trait.
sampling variability /'sæmplɪŋ ˌveərɪə'bɪlɪti/	**Sampling variability** means each sample gives a slightly different result.
parameter /pə'ræmɪtə/	In $x = 2t$ and $y = t^2$, t is the **parameter**. $x = 2t$ $y = t^2$ t
population /ˌpɒpjʊ'leɪʃn/	Define the **population** before deciding whom to include.
sampling distribution /'sæmplɪŋ ˌdɪstrɪ'bju:ʃn/	The **sampling distribution** shows how a statistic varies from sample to sample.
inference /'ɪnfərəns/	Her wet coat supports the **inference** that she walked through rain.
normal /'nɔ:ml/	The sampling distribution is approximately **normal**.
center /'sentə/	Describe the **center**, shape and spread of the distribution.
spread /spred/	The **spread** of the distribution gets smaller with bigger samples.
standard error /'stændəd 'erə/	The **standard error** shows how much the sample mean might vary.

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continuous random variable /kənˈtɪnjuːəs ˈrændəm ˈveərɪəbl/	For a **continuous random variable**, probability is an area under a curve.
Central Limit Theorem /ˈsentrəl ˈlɪmɪt ˈθɪərəm/	The **Central Limit Theorem** says sample means are roughly normal for large samples.
independent /ˌɪndɪˈpendənt/	**Independent** events do not change each other's probabilities.
variance /ˈveərɪəns/	The **variance** is the square of the standard deviation.
skewed /skjuːd/	The data are **skewed** to the right, with a long tail of high values.
randomization distribution	A **randomization distribution** shows results from reshuffling the groups.
unbiased /ʌnˈbaɪəst/	An **unbiased** estimate is right on average.
Bias /ˈbaɪəs/	**Bias** means the estimate is wrong in the same direction every time.
variability /ˌveərɪəˈbɪlɪti/	Low **variability** means estimates are close together.
estimator	The sample mean is an **estimator** of the population mean.
precise /prɪˈsaɪs/	Large samples give a more **precise** estimate.
point estimate /pɔɪnt ˈestɪmət/	A **point estimate** is a single best guess.
SRS	Take an **SRS** of 100 students.

100

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Word	Example
standard deviation /ˈstændəd ˌdiːvɪˈeɪʃn/	A larger **standard deviation** means the values are more spread out.
Large Counts condition /lɑːdʒ kaʊnts kənˈdɪʃn/	The **Large Counts condition** needs at least 10 successes and 10 failures. $10 \qquad 10$
variances add	For independent random variables, the **variances add**.
voluntary-response	A **voluntary-response** sample includes only people who choose to answer.

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