

A.P. Statistics – Vocabulary List

Add your own definitions and examples or references, as are appropriate, to the following vocabulary.
(Please note: These lists may be collected on a random basis for credit.)

<i>Vocabulary Term</i>	<i>Definition, Examples, References</i>
table	
68-95-99.7 Rule	
7-11-13 Rule	
Acceptance sampling	
Addition rule for disjoint events	
Addition rule for unions	
Algebraic properties of logarithms	
Alternative hypothesis (H_a)	
Anonymity	
Association	
Assumptions	
Back-to-back stemplot	
Balance point of a density curve	

Bar chart	
Bias	
Biased statistic	
Binomial coefficient	
Binomial distribution	
Binomial distribution assumptions	
Binomial probability	
Binomial random variable	
Binomial setting	
Bivariate data (x, y)	
Blinding	
Block	
Block design	
Boxplot	

Capture-recapture	
Categorical data	
Categorical variable	
Causation	
Cell	
Cell counts required for chi-square test	
Census	
Census paradox	
Center	
Central Limit Theorem	
Centroid of a scatterplot	
Chance behavior	
Chi-square distributions	
Chi-square statistic	

Chi-square test (χ^2)	
Chi-square test for goodness of fit	
Chi-square test for homogeneity of populations	
Chi-square test of association/independence	
Choosing an SRS	
Cluster	
Coefficient of determination (r^2)	
Column variable	
Common difference	
Common ratio	

Common response	
Common response	
Comparison	
Complement of an event (A^c)	
Complement rule	
Completely randomized design	
Concavity of logarithmic functions	
Concavity of power functions	
Conditional distribution	
Conditional probability	
Conditions for inference about a mean	
Conditions for regression inference	
Confidence interval for a parameter	

Confidence interval for a population mean (C_μ)	
Confidence interval for mean response, μ_y	
Confidence interval for regression slope	
Confidence intervals and two-sided tests	
Confidence intervals for comparing 2 proportions	
Confidence level (C)	
Confounding	
Conjecture	
Constructing a confidence interval for μ	

Continuous random variable	
Control	
Control group	
Convenience sampling	
Correlation (r)	
Count	
Critical value (z^*)	
Cumulative distribution function (cdf)	
Data (x)	
Data gathering	
Datum (x_i)	
Degrees of freedom (df)	
Degrees of freedom ($n - 1$)	
Degrees of freedom ($t(k)$)	

Degrees of freedom for chi-square distributions	
Degrees of freedom of standard error	
Density curve	
Dependence	
Direction	
Discrete random variable	
Disjoint	
Display	
Distribution	
Distribution types	
Dotplot	
Double-blind experiment	
Empty event (\emptyset)	
Equal-areas point of a density curve	
Equally likely outcomes	
Event	
Expected count	

Expected value (\bar{x})	
Experiment	
Experimental design	
Experimental unit	
Explanatory variable	
Exploratory data analysis	
Exponential distribution	
Exponential function	
Exponential growth/decay	
Extrapolation	
Factorial ($n!$)	
Factors	
False negative	
False positive	

Finding normal proportions	
Five-number summary	
Fixed significance level z-tests for a population mean	
Form	
Free response item	
Frequency	
Gap	
Gaussian curve	
Generalizability	
Geometric distribution	
Geometric probability	
Geometric random variable	
Geometric setting	

Graph	
Hawthorne effect	
Hidden bias	
Histogram	
Independence	
Individuals	
Inference	
Inference about a population proportion	
Inference about a proportion	
Inflection points	

Influential observation	
Intercept	
Interquartile range (<i>IQR</i>)	
Intersection (\cap)	
Investigative task	
Joint event	
Joint probability	
Lack of realism	
Law of large numbers	
Learning steps	
Least-squares regression facts	
Least-squares regression line (<i>LSRL</i>) ($\hat{y} = a + bx$)	
Legitimate probability values	

Level	
Linear growth	
Linear transformation	
Linearity	
Logarithmic function	
Logarithmic transformation	
Logic of experimental design	
Lurking variable	
Margin of error (m)	
Margin of error decreases ...	
Margin of error for \hat{p}	
Marginal distributions	
Matched pairs design	
Matched pairs t procedures	
Matching	

Mathematical model	
Mean (\bar{x})	
Mean (μ)	
Mean of a binomial random variable	
Mean of a discrete random variable (μ_x)	
Mean of a geometric count	
Mean of a geometric random variable	
Mean of a sample mean	
Mean of the sampling distribution	
Measurement	
Median (M)	
Mode	
Modified boxplot	
Monotonic decreasing function	
Monotonic function ($f(t)$)	

Monotonic increasing function	
Monotonicity of logarithmic functions	
Monotonicity of power functions	
Multiple regression	
Multiplication principle	
Multiplication rule for independent events	
Multistage (multilevel) sample design	
Negative association	
Nomenclature	
Nonresistant measure	
Nonresponse	
Normal approximation for binomial distributions	
Normal approximation for the sampling distribution	
Normal density curve	
Normal distribution, $N(\mu, \sigma)$	

Normal probability plot	
Normally distributed data	
Null hypothesis (H_0)	
Observation	
Observational study	
Odds	
Ogive	
One-sample t procedures	
One-sample t statistic	
One-sample z -statistic	
One-sided alternative	
One-way table	
Outcomes	
Outlier	

Parallel boxplot	
Parameter	
Pattern	
Percent	
Percentile (%ile)	
Pie chart	
Placebo effect	
Pooled sample proportion	
Pooled sample z -statistic	
Population	
Population mean (μ)	
Population proportion (p)	
Positive association	
Power (of the test against the alternative)	
Power function	
Power law model	
Power regression	

Predicted response (\hat{y})	
Prediction interval	
Prediction interval for a single observation	
Principles of experimental design	
Probabilities in a finite sample space	
Probability	
Probability distribution	
Probability distribution function (<i>pdf</i>)	
Probability histogram	
Probability model	
Probability of taking more than n trials to see the first success	
Probability rules	

Probability sample	
Probability theory	
Probability tree	
Properties of standard deviation (s)	
Proportion	
<i>P</i> -value	
Qualitative analysis	
Quantitative variable	
Quartile (Q_i)	
Random	
Random digits table	
Random phenomenon	
Random seed	
Random selection	

Random variable	
Randomization	
Randomized block design	
Range	
Reexpression	
Regression line	
Relationship: direction, form, strength	
Replacement	
Replication	
Residual	
Residual plot	
Resistant measure	
Response bias	
Response variable	
Robust procedures	
Round-off error	
Row variable	

Rules for means	
Rules for variances	
Sample	
Sample design	
Sample mean (\bar{x})	
Sample proportion (\hat{p})	
Sample size	
Sample size for a desired margin of error	
Sample space (S)	
Sample survey	
Sampling	
Sampling data collection methods	
Sampling distribution of a sample mean from a normal population	
Sampling distribution of a sample proportion	

Sampling distribution of a statistic	
Sampling frame	
Sampling variability	
Scatterplot	
Seasonal variation	
Shape	
Significance	
Significance and Type I error	
Significance level (α)	
Significance test	
Significance tests for regression slope	
Simon's paradox	
Simple random sampling (<i>SRS</i>)	
Simulation	
Simulation analysis	

Size (n)	
Skewed distribution	
Slope	
Split stemplot	
Spread	
Standard deviation (σ)	
Standard deviation (s)	
Standard deviation of a binomial random variable	
Standard deviation of a sample mean	
Standard deviation of the sampling distribution	
Standard error about the line	
Standard error of \hat{p}	
Standard error of the statistic	
Standard error of the statistic $\hat{p}_1 - \hat{p}_2$	
Standard normal distribution	

Standard normal table	
Standardized score	
Standardized value (z)	
Standardized variable	
Statistic	
Statistical inference	
Statistical sampling	
Statistically significant	
Statistically significant at level α	
Statistics	
Stemplot	
Strata	
Stratified random sampling	
Stratum	
Strength	
Study	

Subject	
Sum of the squares for error (<i>SSE</i>)	
Summation (Σ)	
Symmetric distribution	
<i>t</i> procedures	
<i>t</i> -distribution	
Test statistic	
Testing hypotheses	
Time plot	
Total probability	
Total sum of the squares about the mean, \bar{y} (<i>SSM</i>)	
Transformation (<i>t</i>)	
Treatment	
Tree diagram	

Trend	
True regression line (μ_y)	
<i>t</i> -score	
Two sample means comparisons	
Two sample problems	
Two sample standard error	
Two sample <i>t</i> procedures	
Two sample <i>t</i> statistic	
Two sample <i>z</i> statistic	
Two-sided alternative	
Two-way table	
Type I error	
Type II error	

Unbiased statistic	
Undercoverage	
Uniform distribution	
Union (U)	
Univariate data (x)	
Upper p critical value	
Variability	
Variability of a statistic	
Variable	
Variance (s^2)	
Variance of a discrete random variable (σ_x^2)	
Variance of a geometric random variable	
Venn diagram	
Voluntary response sample	
Wording of questions	
z-score	

z-statistic for a sample proportion	
z-test for a population mean	