The Table!

	Categorical Data proportions, percents, counts	Numeric Data means, correlation, slope
Basic Tests 1 or 2 groups, categories, choices, factors, or levels 2 SD Rule applies Can be left, right, or both tails	one proportion (3.1) p=0.40 1 group – 2 choices 40% of people favor banning cell phones on public transportation. Less than 20% of people approve of the job Congress is doing. two proportions (3.2) $p_1=p_2$ 2 groups – 2 choices Men are more likely than women to chew tobacco. Blacks are less likely than Whites to trust police. Gender is not a factor in whether or not a person owns a gun.	one mean (4.1) $\mu=61.5$ 1 group – 1 variable The mean weight of Skittles bag is 61.5g. paired means (4.2) $\mu_d=0$ 1 group – 2 variables – checking equality The size of a person's foot is equal to the length of their forearm. two independent means (4.3) $\mu_1=\mu_2$ 2 groups – 1 variable Women have higher pain tolerance than men. correlation (5.x) $\rho=0$ 1 group – 2 variables – checking relationship The length of someone's index finger is related to their height.
Distribution	Normal (Z)	Student's T
Test Statistic	$z = \frac{\text{observed} - \text{expected}}{\text{standard deviation}}$	$t = \frac{\text{observed} - \text{expected}}{\text{standard error}}$
Advanced Tests more than 2 groups, categories, choices, factors, or levels Always right tail	goodness of fit (3.3) 1 group – 3 or more choices 25% of people are Republican, 35% are Democrats, and 40% are independents. The colors of Skittles are equally distributed. The 68-95-99.7 rule applies to a set of data. test for association (3.4) more than 2 groups or more than 2 choices Race and political party are associated. A person's religion and gender are related. A person's race is a factor in whether or not they were stopped by the police.	one-way ANOVA (4.4) $\mu_1=\mu_2=\mu_3$ more than 2 groups – 1 numeric variable Race is not a factor in a person's SAT score. two-way ANOVA 2 grouping variables, 1 numeric variable Race and gender are related to income. simple regression (5.x) $\beta_1=0$ 1 response, 1 predictor – see correlation A person's age is related to their income. multiple regression (6.x) $\beta_1=\beta_2=\beta_3=0$ 1 response, more than 1 predictor variable A student's score on a test is related to the time spent studying, the amount of sleep the night before, and their SAT score.
Distribution	Chi-Square	F
Test Statistic	$\chi^2 = \sum \left(\frac{\text{observed} - \text{expected}}{\sqrt{\text{expected}}} \right)^2$	$F = \frac{\text{Variance}_1}{\text{Variance}_2} = \frac{MS_{source}}{MS_{error}}$

The symbolic representation is for a typical null hypothesis and may not match the example claims. Example claims may be the null or the alternative hypothesis. There is more to hypothesis testing than will fit on a single page unless you make the font so small you cannot read it, so this should be considered a quick guide rather than an encyclopedia.

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