

2. Comparing Two Means Treating the data as samples from larger populations, test the claim that there is a difference between the mean for presidents and the mean for British monarchs.

3. Normality Assessment Use the longevity times for presidents and determine whether they appear to come from a population having a normal distribution. Explain why the distribution does or does not appear to be normal.

4. Confidence Interval Use the longevity times for presidents and construct a 95% confidence interval estimate of the population mean.

5. ANOVA The display below results from using the one-way analysis of variance test.

a. What is the null hypothesis?

b. Assuming a 0.05 significance level, what conclusion is indicated by the displayed results?

MINITAB

Source	DF	SS	MS	F	P
Factor	2	839	419	3.11	0.051
Error	73	9843	135		
Total	75	10682			

6. Freshman 15: Correlation/Regression Listed below are weights (kg) of eight male college students in September and April of their freshman year (from Data Set 4 in Appendix B).

a. Test for a linear correlation between September weights and the subsequent April weights.

b. Find the equation of the regression line.

c. Find the best predicted April weight for a male freshman student given that his weight in September is 94 kg. How does that result compare to an actual male student who weighed 94 kg in September and 105 kg in April?

September	72	97	74	93	59	54	73	77
April	59	86	69	88	55	56	75	79

7. Platelets: Normal Distribution Based on Data Set 1 in Appendix B, assume that adult females have blood platelet counts that are normally distributed with a mean of 280 and a standard deviation of 65. (All units are in 1000 cells/ μ L.)

a. Find the probability that a randomly selected adult female has a platelet count greater than 345.

b. Find the probability that a randomly selected adult female has a platelet count between 215 and 345.

c. If 25 adult females are randomly selected, find the probability that the mean of their platelet counts is less than 319.

d. Find the value of P_{80} , the 80th percentile.

8. Job Priority Survey *USA Today* reported about an Adecco Staffing survey of 1000 randomly selected adults. Among those respondents, 20% chose health benefits as being most important to their job.

a. What is the number of respondents who chose health benefits as being most important to their job?

b. Construct a 95% interval estimate of the proportion of all adults who choose health benefits as being most important to their job.

c. Based on the result from part (b), can we safely conclude that the true proportion is different from $1/4$? Why?