

Instructions: Show all work. Answers without work can only be graded all or nothing. Partial credit is available only when work is shown. Answer all parts of each problem. Provide explanations as indicated. You may use Minitab or any other statistical software (such as a calculator or Excel) to complete any required statistical calculations or graphs.

1. Use the data on Sheet 1 in the data file **143quiz8data.xlsx** to find a 90% confidence interval for the difference of mean times between those with Basic cable and those with Extended cable.

Unequal variances

Estimation for Difference

90% CI for	
Difference	Difference
2.340	(0.941, 3.739)

Equal variances (pooled)

Estimation for Difference

Pooled 90% CI for	
Difference	StDev Difference
2.340	1.785 (0.956, 3.724)

2. Use the data on Sheet 3 to construct a 95% confidence interval for the mean difference of the paired data.

Estimation for Paired Difference

95% CI for			
Mean	StDev	SE Mean	μ difference
0.363	0.406	0.108	(0.128, 0.597)

μ difference: mean of (CORNFLK (mmol/L) - OATBRAN (mmol/L))

3. Use the data on Sheet 2 to construct a 99% confidence interval for the difference of proportion of female births between teenage mothers (those under 19) and mothers in their 20s.

Estimation for Difference

99% CI for	
Difference	Difference
0.0022134	(-0.095175, 0.099601)

CI based on normal approximation