SPSS on Two-Sample Test Worksheet Name: _____ , _____

A research paper by Squires et al. (1978) assessed the acute effects of alcohol on auditory brainstem potentials in humans. Six volunteers participated in the study. The latency (delay) in response to an auditory stimulus was measured before and after an intoxicating dose of alcohol. The measurements of the latency of peak responses (in milliseconds after the stimulus onset) in the six subjects were as follows:

	Latency of Peak Treatment					
Individual's ID	***1***	***2***	***3***	***4***	***5***	***6***
Before alcohol	3.85	3.81	3.60	3.68	3.78	3.83
After alcohol	3.82	3.95	3.80	3.87	3.88	3.94

State the hypothesis in words, and perform a **paired-sample** *t*-test to test the significance of the **difference** between before alcohol and after alcohol at the $\alpha = 5\%$.

1) Perform the parametric t-test.

Null Hypothesis:

Alternative Hypothesis:

Report Normality test result using p-value:

Value of the t-test statistic:

Decision Rule:
p-value approach:

Conclusion with p-value:
(Also comment on whether After Alcohol the delay is on average longer?)

2) Perform the nonparametric signed rank test.

Value of the test statistic:

Decision Rule:
p-value approach:

Conclusion with p-value:
(Also comment on whether After Alcohol the delay is on average longer?