**Exercise: Independent and Paired t-tests**

**Data: Lung**

Name:

Section:

1. Is the investigational drug effective in improving the lung capacity of chronic smokers?

Which are the relevant variables to this problem? What are their roles and levels of measurement?

| [type your answers here] |
| --- |

Which type of t-test should be used? Why?

| [type your answers here] |
| --- |

State the Null Hypothesis

| [type your answers here] |
| --- |

State the Alternative Hypothesis (Identify if it is one-tailed or two-tailed)

| [type your answers here] |
| --- |

State the Level of Significance

| [type your answers here] |
| --- |

Perform the test in Jamovi

| [paste the Jamovi results here] |
| --- |

Interpret the results of the Assumption Checks

| [type your answers here] |
| --- |

Report the p-value and 95% CI (Include the Descriptive Plots)

| [type your answers here] |
| --- |

Make a Statistical Decision

| [type your answers here] |
| --- |

Make a Statistical Conclusion (Include your answer to the question asked in the problem)

| [type your answers here] |
| --- |

1. Is there a difference in the smoking index of the subjects obtained from the two localities

Which are the relevant variables to this problem? What are their roles and levels of measurement?

| [type your answers here] |
| --- |

Which type of t-test should be used? Why?

| [type your answers here] |
| --- |

State the Null Hypothesis

| [type your answers here] |
| --- |

State the Alternative Hypothesis (Identify if it is one-tailed or two-tailed)

| [type your answers here] |
| --- |

State the Level of Significance

| [type your answers here] |
| --- |

Perform the test in Jamovi

| [paste the Jamovi results here] |
| --- |

Interpret the results of the Assumption Checks

| [type your answers here] |
| --- |

Report the p-value and 95% CI (Include the Descriptive Plots)

| [type your answers here] |
| --- |

Make a Statistical Decision

| [type your answers here] |
| --- |

Make a Statistical Conclusion (Include your answer to the question asked in the problem)

| [type your answers here] |
| --- |