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Task 3

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In what follows use any of the following tests/procedures: Regression, multiple regressions, confidence intervals, one-sided t-test or two-sided t-test. All the procedures should be done with 5% P-value or 95% confidence interval.

Upload data [HeartRate_Exercise \(/Content/DataFiles/HeartRate_Exercise.txt\)](/Content/DataFiles/HeartRate_Exercise.txt). These data are based on 45 randomly chosen High school students.

SETUP: Is it reasonable to claim that students who do not exercise or exercise less than 10 hours a week have higher average heart beat rate at rest than those who exercise 10 hours or more a week. Given the data your job is to confirm or disprove this claim.

9. What test/procedure did you perform?

- ☐ a. One-sided t-test
- ☐ b. Two-sided t-test
- ☐ c. Regression
- ☐ d. Confidence interval

10. What is the P-value/margin of error?

- ☐ a. 7.064974
- ☐ b. 0.089476
- ☐ c. 0.016303
- ☐ d. 0.032605
- ☐ e. None of these

11. Statistical Interpretation

- ☐ a. Since P-value is very small the test is conclusive.
- ☐ b. Since P-value is very small we are very confident that the slope is not zero.
- ☐ c. Since P-value is very large the test is inconclusive.
- ☐ d. We are 95% certain that the confidence interval is [58.82, 72.95].
- ☐ e. None of these

12. Conclusion

- ☐ a. Yes, I am confident that the above assertion is correct.
- ☐ b. No, we cannot claim that the above assertion is correct.

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