

Self-Check 10.4, 12.2, 12.4

Name: _____ Date: _____ Row: _____

Self-Check 10.4, 12.2, 12.4

1. A study was conducted to investigate how effective a new diet was in lowering cholesterol. Results for the randomly selected subjects are shown in the table. The differences have a normal distribution. Are the subjects' cholesterol levels lower on average after the diet? Test at the 5% level.

Subject	A	B	C	D	E	F	G	H	I
Before	209	210	205	198	216	217	238	240	222
After	199	207	189	209	217	202	211	223	201

1. Null and Alternative Hypothesis
 2. Calculator Work
 3. Test Statistic and P-Value
 4. Conclusion about the null hypothesis
 5. Final conclusion that addresses the original claim
 6. Test the above claim by constructing an appropriate confidence interval.
2. Amelia plays basketball for her high school. She wants to improve to play at the college level. She notices that the number of points she scores in a game goes up in response to the number of hours she practices her jump shot each week. She records the following data:

x (hours practicing jump shot)	y (points scored in a game)
5	15
7	22
9	28
10	31
11	33
12	36

Use a 0.05 significance level to test the claim that there is a linear correlation between the number of hours she practices her jump shot each week and the number of points she scores in a game.

1. Null and Alternative Hypothesis
2. Calculator Work
3. Test Statistic, P-Value and Linear correlation coefficient r
4. Conclusion about the null hypothesis

Method 1:

Method 2:

5. Final conclusion that addresses the original claim

Self-Check 10.4, 12.2, 12.4 is shared under a [not declared](#) license and was authored, remixed, and/or curated by LibreTexts.