

Six subjects were examined and given an exercise routine to follow to determine whether the regime would result in an improvement in health scores. Participants were measured before the regimes began, at 3 months and at 6 months. To determine if the intervention was effective, conduct a hypothesis test to see if the mean scores of each intervention are the same or different.

Exercise Intervention				
Subjects	Pre-	3 Months	6 Months	Subject Means:
1	45	50	55	50
2	42	42	45	43
3	36	41	43	40
4	39	35	40	38
5	51	55	59	55
6	44	49	56	49.7
Monthly Means:	42.8	45.3	49.7	
		Grand Mean:	45.9	

Do these results provide evidence that the intervention worked? Use an 0.05 level of significance. Assume that the mean differences are approximately normally distributed.

1. State the Type of Hypothesis or the TI calculator function to be used (and any settings):

2. State the Null and Alternative Hypotheses:
 H_0 :
 H_a :

3. List all the data entered into your calculator to find the test statistic, or state the formula used if solving by hand.

4. Provide the output of the calculator. If solving by hand, find the test statistic and convert this value to a P-value using your calculator or the table.

5. Graph the critical values and the test statistic on the normal distribution.

6. What is your conclusion based on the critical values/test statistic, or the significance levels/p-values? Do you reject the null or fail to reject the null?

7. Restate your conclusion in the context of the problem (circle your choice):

There IS/IS NOT sufficient evidence the intervention DID/DID NOT change health scores after several months.