

Forty-four sixth graders were randomly selected from a school district. Then, they were divided into 22 matched pairs, each pair having equal IQ's. One member of each pair was randomly selected to receive special training. Then, all of the students were given an IQ test. Test results are summarized below.

Pairs	1	2	3	4	5	6	7	8	9	10	11
Training	95	89	76	92	91	53	67	88	75	85	90
No Training	90	85	73	90	90	53	68	90	78	89	95
Pairs	12	13	14	15	16	17	18	19	20	21	22
Training	85	87	85	85	68	81	84	71	46	75	80
No Training	83	83	83	83	65	79	83	60	47	77	83

Do these results provide evidence that the training changed student performance? 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 special training DID/DID NOT change student performance on the IQ test.