

Suppose we want to show that only children have an average higher cholesterol level than the national average. It is known that the mean cholesterol level for all Americans is 190, with a standard deviation of 15. We test 100 only children and find their mean cholesterol is 198.

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 that only children DO/DO NOT have a higher cholesterol than the general population.