# Wording of Final Conclusion.

In this activity you will use the animated flowchart to determine the proper wording of the final conclusion of a hypothesis test.

Wording of the final conclusion is essential for a clear understanding of the results and to avoid wording that is somehow inconsistent with the correct conclusion.

Let’s begin with the following claim:

* A recent magazine article states that the percentage of workers who get jobs through networking is greater than 50%.

A hypothesis test indicates that the null hypothesis should be rejected.

The first step in using the proper wording is to determine whether the original claim contains the condition of equality.

Please select the appropriate option for the claim that the percentage of workers who get jobs through networking is greater than 50%.

Does this claim contain the condition of equality?

That's incorrect. The original claim is that the percentage is *greater* than 50%, which does not include equality. Try again

That's correct. The original claim is that the percentage of workers who get jobs through networking is greater than 50%, and “greater than 50%” does not include equality.

Next, consider whether the null hypothesis is rejected.

In this example, it was initially stated that the null hypothesis IS REJECTED.

Given that the null hypothesis is rejected, the appropriate wording of the final conclusion is as follows:

*There is sufficient evidence to support the claim that the percentage of workers who get jobs through networking is greater than 50%.*

Note that this is the ONLY case in which the original claim is actually SUPPORTED.

Returning to the previous question, if the hypothesis test had resulted in a *failure* to reject the null hypothesis, then the proper wording of the conclusion would be as follows:

*There is not sufficient sample evidence to support the claim that the percentage of workers who get jobs through networking is greater than 50%.*

Let’s now consider a different example:

* A quality control analyst claims that manufactured soda cans contain a mean of 12 ounces of soda.
* A hypothesis test results in *failure* to reject the null hypothesis.

Does this claim contain the condition of equality?

That's not correct. The original claim is that the soda cans have a mean of 12 ounces of soda, which can be expressed as *“the mean is EQUAL TO 12 ounces.”*

So the original claim *does* contain the condition of equality. Try again.

That’s correct. The original claim is that the soda cans contain a mean of 12 ounces of soda, which can be expressed as “the mean is EQUAL TO 12 ounces,” so the original claim does contain the condition of equality.

Next, we again consider whether the null hypothesis is rejected.

In this example, it was initially stated that a hypothesis test failed to reject the null hypothesis.

With a failure to reject the null hypothesis, the proper wording for the conclusion would be as follows:

*“There is not sufficient evidence to warrant rejection of the claim that the soda cans have a mean equal to 12 ounces of soda.”*

Returning to the previous question, if the statistical analysis had resulted in REJECTION of the null hypothesis, then the proper wording of the conclusion would be:

“*There is sufficient evidence to warrant rejection of the claim that the soda cans have a mean equal to 12 ounces of soda.*”

Note that this is the ONLY case in which the original claim is REJECTED.

Now, it is time to test your knowledge.

Let’s try another one.

Let’s try another one.

In this activity we reviewed the procedure for determining the proper wording of the final conclusion of a hypothesis test.

Remember: Wording of the final conclusion is essential for a clear understanding of the results and to avoid wording that is somehow inconsistent with the correct conclusion.

Congratulations, you have mastered an important concept of Statistics!

In hypothesis testing, as in life, choose your words carefully.