

# Week 5: Hypothesis Testing

For this discussion, create and post a 1-2 minute video describing a real-world example of when a hypothesis test could be used. Your video should also include a numerical example for another student to work through in their response. The example can use real data or data that you make up, such as values for the mean, standard deviation, and sample size. Be sure to note if the standard deviation is from the population or the sample. In your responses to other students, show the work and describe the steps you uses to solve that hypothesis example. Video technology does not need to be used in the replies, but you are always welcome to use it! For the videos, you can use recorded PowerPoints, MP4 files, or any video technology where the file can be loaded into the discussion.

This topic was locked Feb 6 at 11:59pm.

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Jan 16, 2022Jan 16 at 3:12pm

[Manage Discussion Entry](#)

Dear students,

Welcome to Week 5 discussion.

For this discussion, create and post a 1-2 minute video describing a real-world example of when a hypothesis test could be used. Your video should also include a numerical example for another student to work through in their response. The example can use real data or data that you make up, such as values for the mean, standard deviation, and sample size. Be sure to note if the standard deviation is from the population or the sample. In your responses to other students, show the work and describe the steps you uses to solve that hypothesis example. Video technology does not need to be used in the replies, but you are always welcome to use it! For the videos, you can use recorded PowerPoints, MP4 files, or any video technology where the file can be loaded into the discussion.

I look forward to reading your posts.

Please, do not forget to participate at least three different days during our week.

Conversational posts are allowed and encouraged, but they **will not count for grading purposes!**

Make sure that **THREE** of your posts for the week are Statistical in nature **AND** a direct response to the problems given above. Remember:

EACH STUDENT NEEDS TO POST A MINIMUM OF 3 TIMES PER WEEK ON 3 DIFFERENT DAYS WITH THE FIRST POST NO LATER THAN WEDNESDAY!

Best,  
PM

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○

[Collapse Subdiscussion](#) Tina Miller

**Tina Miller**

Jan 30, 2022 Jan 30 at 6:30pm

[Manage Discussion Entry](#)

Hello Professor and Class,

My hypothesis post:

(4 likes)

▪

[Jonathan Hidalgo](#)

**Jonathan Hidalgo**

Feb 1, 2022 Feb 1 at 3:52pm

[Manage Discussion Entry](#)

Hi Tina,

Restaurant is a great example, specially in fast food restaurant. Although most of the time the business hours are set, rarely they will make adjustment to open or close early. But its helps comparing information based on a holiday or a period of time to schedule and run labor analysis for the company to determine based on real time sales the analysis will determine if your labor percentage is to high then you get to adjust to either send employees home or to ramp up labor within a specific time during the day. This helps in fast food restaurants not to be caught of guard if there was to be a rush hour or busy at a none rush hour.

(1 like)

▪

[Trista Rigot](#)

**Trista Rigot (She/Her)**

Feb 2, 2022 Feb 2 at 11:29am

### [Manage Discussion Entry](#)

Great Video this week

Tina.

I'm struggling a bit this week with putting my own problem into words, but listening to you has helped me.

Using this weeks course resources, I hope I did it correctly and solved for the same answer you were looking for.

Hypothesis Test for $\mu$		
Information Provided by the Problem		
Level of Significance	0.5	(decimal)
Mean under $H_0$		
n	155	
Sample Mean	8500	
StDev	1500	
Use t or z?	z	
		NOTE: If sample standard deviation is used If population standard deviation is used

  

Critical Values		
Right-Tailed (>)	0.000000	
Left-Tailed (<)	0.000000	
Two-Tailed ( $\neq$ )	-0.674490	0.674490

(1 like)

### [Andrew Serna](#)

## Andrew Serna

Feb 2, 2022 Feb 2 at 6:37pm

### [Manage Discussion Entry](#)

Great post Tina,

I agree that hypothesis testing can be used in any business sector, especially restaurants. Thank you for your example as well it will help me create a example of my own because Im a little lost on this subject to be honest.

### [Collapse Subdiscussion Marnice Banks](#)

## Marnice Banks

Feb 3, 2022 Feb 3 at 7:22pm

### [Manage Discussion Entry](#)

Hi Tina,

Great Post!

I totally agree with you. Being proactive and running labor analysis is definitely a way not to be caught off guard. Running labor analysis for the company to determine based on real time sales the analysis will determine if your labor percentage is to

high then you get to adjust to either send employees home or to ramp up labor within a specific time during the day.

[Abdullah Jubaer](#)

## Abdullah Jubaer

Feb 6, 2022 Feb 6 at 12:41pm

[Manage Discussion Entry](#)

Hello Morice and other,

### **How a manager know is it a right decision for business or not?**

If a business analyst reaches the statistical conclusion to fail to reject the null hypothesis, he makes either a correct decision or a Type II error. If the null hypothesis is true, the analyst makes a correct decision. If the null hypothesis is false, then the result is a Type II error.

In business, failure to reject the null hypothesis may mean staying with the status quo, not implementing a new process, or not adjusting. If a new process, product, theory, or adjustment is not significantly better than what is currently accepted practice, the decision maker makes a correct decision. However, if the new process, product, theory, or adjustment would significantly improve sales, the business climate, costs, or morale, the decision maker makes an error in judgment (Type II). In business, Type II errors can translate to lost opportunities, poor product quality (because of failure to discern a problem in the process), or failure to react to the marketplace.

Sometimes the ability to react to changes, new developments, or new opportunities is what keeps a business moving and growing. Thus, Type II error plays an important role in business statistical decision-making.

Reference: CHAPTER 9 Statistical Inference: Hypothesis Testing for Single Populations

<https://devry.vitalsource.com/reader/books/9781119591351/epubcfi/6/30%5B%3Bvnd.vst.idref%3DAc07%5D!4> (Links to an external site.)

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