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▶ Week 0: Introduction to Data (Optional Review)

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#### Readings

Reading Check due May 03, 2016 at 17:00 UTC

#### Lecture Videos

Comprehension Check due May 03, 2016 at 17:00 UTC

Week 3: Hypothesis Testing (Two Group Means) &gt; Pre-Lab &gt; Conduct the Analysis



Bookmark

Reflect on the Question

Analyze the Data

Draw Conclusions

## Primary Research Questions

1. Who is happier at the beginning of the semester: under-classmen or upper-classmen?
2. Does student happiness change from the beginning of the semester to the end?

## Conduct the Analysis in R

1. Type or copy the script from the the Prepare for the Analysis section into the Script window of R.
2. Select the portion of the code you wish to run, then press "ctrl+ enter."
3. Output can be found in the Console window.

(5/5 points)

### Pre-Lab Question 1

**At the beginning of the semester:**

1a. What percent of the time, on average, were underclassmen happy? (round to one decimal place)

79.67




Answer: 79.7

79.67

1b. What percent of the time, on average, were upperclassmen happy? (round to one decimal place)

## R Tutorial Videos


## Pre-Lab

Pre-Lab due May 03,  
2016 at 17:00 UTC 

## Lab

Lab due May 03, 2016  
at 17:00 UTC 

## Problem Set

Problem Set due May  
03, 2016 at 17:00 UTC 

- ▶ Week 4:  
Hypothesis  
Testing  
(Categorical  
Data)



Answer: 78.3

## Report test results, rounded to 3 decimal places:

1c. t-statistic=



Answer: 0.423

1d. p-value=



Answer: 0.675

1e. We should



Answer: fail to reject the null hypothesis that there is  
no difference in happiness between under- and upper-classmen at the  
beginning of the semester.

[Click here for a video explanation of how to answer this question.](#)

*You have used 1 of 1 submissions*

(5/5 points)

## Pre-Lab Question 2

2a. How many students were in this analysis?



Answer: 214

2b. The average change in happiness was 1.27%. Was this an **increase** or  
**decrease** over the semester?



Answer: Decrease

**Report test results, rounded to 3 decimal places:**

2c. t-statistic=



Answer: 1.684

2d. p-value=



Answer: 0.094

2e. We should



**Answer:** fail to reject the null hypothesis that there is no change in happiness over the semester.

[Click here for a video explanation of how to answer this question.](#)

*You have used 1 of 1 submissions*

(3/3 points)

*What were the shapes of these distributions?*

**Pre-Lab Question 1**

3a. The distribution of underclassmen happiness was \_\_\_\_\_.



**Answer:** left-skewed

3b. The distribution of upperclassmen happiness was \_\_\_\_\_.



**Answer:** left-skewed

**Pre-Lab Question 2**

3c. The distribution of happiness difference scores was \_\_\_\_\_.

nearly Normal but with a slight positive skew ▾



**Answer:** nearly Normal but with a slight positive skew

[Click here for a video explanation of how to answer this question.](#)

*You have used 1 of 1 submissions*

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