



Bookmarks

- ▶ Important Pre-Course Survey
- ▶ Contact Us
- ▶ How To Navigate the Course
- ▶ Discussion Board
- ▶ Office Hours
- ▶ Week 0: Introduction to Data (Optional Review)
- ▼ **Week 1: Sampling**

Readings

Reading Check due May 03, 2016 at 18:00 UTC

Lecture Videos

Comprehension Check due May 03, 2016 at 18:00 UTC

R Tutorial Videos**Pre-Lab**

Pre-Lab due May 03, 2016 at 18:00 UTC

Lab

Lab due May 03, 2016 at 18:00 UTC

Problem Set

Problem Set due May 03, 2016 at 18:00 UTC

Week 1: Sampling > Lab > Draw Conclusions



Bookmark

Reflect on the Question

Analyze the Data

Draw Conclusions

Primary Research Question

What percentage of the time are college students happy? How does our estimate of the true mean change as sample size increases?

(9/9 points)

Write Your Conclusion

Answer the question and support your answer with statistics:

In this lab, we knew the average percentage of the time college students are happy for our population of college students. The population mean was ✓ **Answer:** 78.03 % and the standard deviation was

✓ **Answer:** 16.31 %. The happiness scores were

✓ **Answer:** negatively skewed .

We drew samples of different sizes from our population to simulate the Central Limit Theorem. In short, the CLT says three things:

1. As sample size ✓ **Answer:** increases , sampling distributions become more Normal.



2. The mean of the ✓

Answer: sampling distribution will be the population mean.

3. The variability of the sample means, or the

✓ **Answer:** standard error , can be predicted by dividing the population standard deviation by the square root of the sample size.

Our simulation results ✓ **Answer:** were consistent with this theory. As we increased the size of our sample from 5 to 25, the

sample means become less variable and tended to cluster more tightly around the true mean. In other words, our sample means became
  **Answer:** better estimators of the true population mean. In addition, the shape of the distribution became more
  **Answer:** Normal as sample size increased.

You have used 1 of 1 submissions

© All Rights Reserved



© edX Inc. All rights reserved except where noted. EdX, Open edX and the edX and Open EdX logos are registered trademarks or trademarks of edX Inc.

POWERED BY
OPENedX

