IMPORTANT: Please print and sign your name below.

Quiz 3. Fall 2016

Time: 30 minutes

Instructions: There are 4 pages, including this page. All together the quiz has a maximum of 5 points.

This is a closed-book and closed-notes quiz.

You are allowed to use one crib sheet (8.5x11).

Please sign here to indicate that you have adhered to university policies regarding ethical behavior in preparing for and completing this quiz.

Write your answers on the Quiz 3 answer sheet (page 2).
Submit your Excel file on Blackboard. Highlight your answers. Include meaningful labels. You may include comments. It will make partial credit possible.

"I hereby certify that I have adhered to the university policies regarding ethical behavior in preparing for and completing this quiz."

Name (please print) : _____

Signature : _____

Quiz 3. Answer Sheet

	Official Last name:	**Official First name:**

Question	**Answer**	
1	Cell 1:	Cell 2:
2	H0: Ha:	
3		
4		
5		

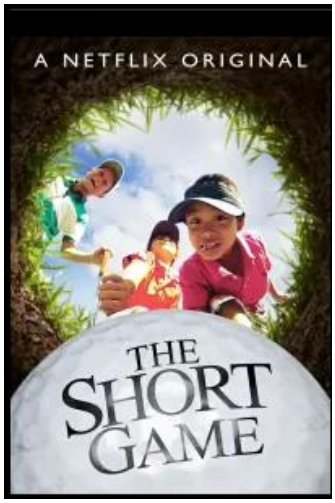
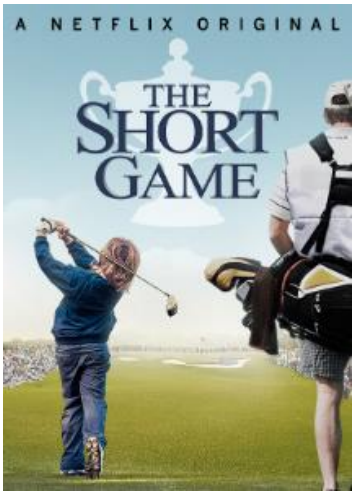
A/B testing at Netflix

Netflix is constantly looking at ways to help their 81.5M members discover great stories that they will love. A big part of that is creating a user experience that is intuitive, fun, and meaningfully helps members find and enjoy stories on Netflix as fast as possible.

It is known that if you don't capture a member's attention within 90 seconds, that member will likely lose interest and move onto another activity. As the old saying goes, a picture is worth a thousand words. Neuroscientists have discovered that the human brain can process an image in as little as 13 milliseconds, and that across the board, it takes much longer to process text compared to visual information. Can Netflix improve the experience by improving the images displayed?

One of the goals was to identify artwork that enabled members to find a story they wanted to watch faster.

Netflix ran A/B test on the single title "The Short Game" - an inspiring story about several grade school students competing with each other in the game of golf.
If you see the default artwork for this title you might not realize easily that it is about kids and skip right past it. Could Netflix create a few artwork variants that increase the audience for a title?

Cells	Cell 1 (Default)	Cell 2
Box Art	 Default artwork	

To answer this question, they built an A/B test where members in each test cell get a different image for that title. The audience engagement with the title for each variant was measured. The data are given in Netflix_AB_test.xlsx

Use Cell 1 as default, test whether Cell 2 image results in more views.

Answer the following questions.

1. Find the percentage of customers that viewed the title for each artwork version, i.e. Cell 1 and Cell 2.

2. State the null and alternative hypothesis Netflix needs to test to decide whether the image from Cell 2 is better than the default one.

3. Use Excel to run the A/B test. Set records for Cell 1 as variable 1, and cell 2 – variable 2. What is the corresponding test statistic value?

4. What is the p-value associated with the observed value of the test statistic?

5. What is your conclusion at the significance level α=.05? Is the second image (Cell 2) significantly better?