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Quiz 1 needs modification

david scott Comparing two groups (/learn/inferential-statistics/module/7YoGo/discussions) · 4 days ago (/learn/inferential-statistics/discussions/5OAu6N8WEeWd6hLHI8FYwQ)

The language in many quiz 1 questions is vague and/or imprecise. Combined with the lack of instructions on decimal places, most of the open-ends are crap-shoots.

Can you please edit/clarify the following:

- Question 7 - do you want the test statistic or the resulting p-value from the Z-test; for either, to how many significant digits; and is the order Clowns minus No Clowns
- Question 10 - to how many significant digits; and is the order Econ minus Art; and do you mean "variance" or "standard deviation" in the question
- Question 11/12 - a 95% confidence interval is always of something; what is the "something" in this case -- IQ of the Mozart group, difference in IQ between the Mozart and Jackson group, etc.; or, are you just looking for size of the confidence interval (so on a mean of 0); also, does "standard error across . . . " mean that you have already run pooling, or do you have standard error in each group of
- Question 14 - with no labels and duplicate variables (two Like0 and two Donotlike1), there is no plausible right answer to this question
- Question 15 - no idea since the right answer is not one of the four options, but the closest to being right of the four options is not it
- Questions 17/18 - I think the auto-grader may have the answers reversed for these

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david scott · 4 days ago (/learn/inferential-statistics/discussions/5OAu6N8WEeWd6hLHI8FYwQ/replies/t9Tr49dsEeWFBAq2sszqEw)

I used a quiz retake to research and find the "right" answers for 10, 15, 17-18:

- Question 10 needs 3 digits after the decimal and they really mean "variance" and not "standard deviation" in the question; I had wrongly assumed that was a typo originally
- For question 15, pick the right difference in means with the wrong t-statistic (all the options are wrong anyway) and importantly also the wrong conclusion about what it would mean for the null hypothesis
- For questions 17-18, choose the opposite of what it should mean for the null hypothesis (assume you would always reject with t=0 and always fail to reject with t=infinite). In other words, assume the auto-grader will only accept the wrong answer.

I have not yet cracked the code to questions 7, 11-12, or 14. Any ideas on those?

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ID (/learn/inferential-statistics/profiles/94157964ccf80874d4ce7f54f27c3287)

Ignacio Augusto Damboriana · 3 days ago (/learn/inferential-statistics/discussions/5OAu6N8WEeWd6hLHI8FYwQ/replies/YDNJpd82EeWu-hLGc64CMw)

I have the same problems as you in questions 7 and 14. They look super easy, but using the formulas to compute the z-score in exercise 7 (even if you answer with a negative number... something I tried just in case) the answer is wrong.

Then question 14 is only applying a formula, it can not be wrong the answer I am submitting... but apparently it is...

Any new information about this?

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david scott · 3 days ago (/learn/inferential-statistics/discussions/5OAu6N8WEeWd6hLHI8FYwQ/replies/YDNJpd82EeWu-hLGc64CMw/comments/x7U2_t85EeWg_AqAJ4-koQ)

I tried rounding with question 7 and that did not work either. I have no idea what the data provided in question 14 means - a table with no labels and duplicate variables deserves an answer like NA or NaN. I tried diagonals in both directions (NW-SE and NE-SW) but neither solved. I suspect it is looking for the chi-squared on one of those diagonals, but who knows?

Were you able to interpret questions 11-12 (aggravating, since they are really the same question) in a way that they can be answered? My best guess was that it is the difference in means, so (130-90) +/- 4.47*1.96, but the question is so vaguely worded and this is not what the auto-grader is looking for.

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Ignacio Augusto Damboriana · 3 days ago (/learn/inferential-statistics/discussions/5OAu6N8WEeWd6hLHI8FYwQ/replies/YDNJpd82EeWu-hLGc64CMw/comments/taHpTt_AEeWeGxL4Kv6OUQ)

Question 14 is a simple McNemar's test. If you look at the formulas PDF you'll see that the question is very easy, just applying the formula.

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Yes, that formula works with the auto-grader now. The answer from that calculation was not accepted as correct yesterday.

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Zara Bamdad Teaching Staff · 3 days ago (/learn/inferential-statistics/discussions/5OAu6N8WEeWd6hLHI8FYwQ/replies/s6uB5N-ZEeWnYQ5EMRsIgw)

Hey everyone,

statistics/profiles/3cdb3ac214a020ebfbe64f1e50b03eac) Really sorry you had such a frustrating experience annoying for you! Thanks so much for letting us know about it, we need lots of feedback like this to make the course better :)

I guess I'll go through the issues systematically.

Question 7 - the question asks for the test statistic. If the question wants the p-value/alpha level it will be asked for explicitly. It's supposed to be noclowns - clowns (now made clearer in question).

Question 10 - no typo, we really meant variance :)

Question 11/12 - the confidence interval is for the sample statistic (now made clearer in question).

Question 14 - Really sorry about these duplicate labels, should be fixed now.

Question 15 - Glad you pointed this out! Question has been changed.

Question 17/18- Again, thanks for letting us know about these. They should be corrected now.

Generally, you should give answers to three decimal places but the quizzes have been engineered to accept a range so you shouldn't be penalised if you provide more decimal places. Apologies, this should have been made clearer! We're adding it now.

We've published the changes to clarity/accuracy to the quiz, but to see the changes you might have to clear your cache and refresh.

Thanks so much for alerting us to these issues. It's our first time running this course so any feedback you can give is incredibly helpful to us :)

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Diego Alfaro · 3 days ago (/learn/inferential-statistics/discussions/5OAu6N8WEeWd6hLHI8FYwQ/replies/s6uB5N-ZEeWnYQ5EMRsIgw/comments/WbC4Hd-7EeWkjA5XBXeNAQ)

(/learn/inferential-statistics/profiles/74ca6233f49240762b42eb595c013d26)

Thanks for your explanations Zara. On question 14, I've cleared my cache and refreshed, but I still see the duplicate labels. Would you mind posting which is which here?

11? 10? 01? 00?

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david scott · 3 days ago (/learn/inferential-statistics/discussions/5OAu6N8WEeWd6hLHI8FYwQ/replies/s6uB5N-ZEeWnYQ5EMRsIgw/comments/3eaXj9_LEeW04RKZ8XRvQQ)

(/learn/inferential-statistics/profiles/1f7f043688de1cdf42d40ee185779133)

Thank you for making these updates, Zara. The new questions are much clearer and there are no longer any obvious auto-grader errors. A few remaining thoughts:

- Question 14 is still a little iffy, since the accepted answer is perhaps the negative of what you want. It matches the formula in the PDF, but people like exercise less after meeting the life coach. "Bad->Good" is 168 and "Good->Bad" is 197 so the test-statistic presumably would be negative if the hypothesis was that the life coach will drive "Bad->Good".
- Questions 11-12 are much improved, but there is still an ambiguity; what precisely does "The standard error across both groups was 4.47" mean? The most literal (but vague) interpretation of "across" in that sentence leads to "pooled standard error was run and found to be 4.47". Does the question instead mean standard error *within* each of the two groups is 4.47, leaving the reader to work through pooled standard error?

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ZB

Zara Bamdad Teaching Staff · 2 days ago (/learn/inferential-statistics/discussions/5OAu6N8WEeWd6hLHI8FYwQ/replies/s6uB5N-ZEeWnYQBEMRsIgw/comments/NmGt1uBOEeWClBISeSYiRw)

(/learn/inferential-statistics/profiles/3cdb3ac214a020ebfbe64f1e50b03eac)

No problem!

Question 14 - I see where the problem is, the labels still weren't clear enough so they've been updated again. '1' is like and '0' is don't like. Top left cell is 11, top right is 10, bottom left is 01, bottom right is 00. This means 197 is didn't like -> like.

Question 11-12 - You're correct. The standard error 'across both groups' just means the standard error in both groups is 4.47 (so you don't have to do any extra calculations for it, you can just use it as-is).

Does this help?

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Ignacio Augusto Damboriana · 2 days ago (/learn/inferential-statistics/discussions/5OAu6N8WEeWd6hLHI8FYwQ/replies/s6uB5N-ZEeWnYQ5EMRsIgw/comments/bO6hpuCiEeWmCgoFfSre2Q)

Zara, I'm sorry but i just can't get how this Works...

I have submit an answer now, almost exactly the same than the one before, but this time I've get an score of 14/18 and the one before 17/18!

Questions 10, 11 and 12 where correct the first time and now they are not...

Question 7.- It is a very easy question, it is very hard to understand how are we all getting it wrong. Could we change this question (at least) to a multiple choice question so we can eliminate the rounding or decimals issue??

It is just applying the formula given in the lesson, I've tried with negative and positive answer, but no one works...

Can you help me please? Thanks!!

Augusto

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david scott · 2 days ago (/learn/inferential-statistics/discussions/5OAu6N8WEeWd6hLHI8FYwQ/replies/s6uB5N-ZEeWnYQ5EMRsIgw/comments/W6wUn-CzEeW3kQ5SlADIGQ)

Per Augusto's feedback:

- I agree on question 7, I could not get the auto-grader to accept anything (tried both of +/- with neither accepted)
- I never found an answer that solves on Questions 11-12
- My Question 10 answer was the same before and after the quiz re-write, and accepted both times. Has it been re-written again?

Specific to questions 11-12, they seem straightforward but with a large range of uncertainty about "what question is being asked".

CI = diff +/- SEdiff * Tc with uncertainties about:

- diff - presumably 130 vs 90 in one direction or the other
- SEdiff - depending on interpreting "across" for the provided standard error of 4.47 and two equal sized groups, either 4.47 or 4.47 * sqrt(2)
- Tc - provided as 1.96
- CI could be standardized such as by dividing by SEdiff

I tried a few permutations but never found what the auto-grader wants. What did you do in your previous version accepted by the auto-grader?

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Ignacio Augusto Damboriana · a day ago (/learn/inferential-statistics/discussions/5OAu6N8WEeWd6hLHI8FYwQ/replies/s6uB5N-ZEeWnYQ5EMRsIgw/comments/Zm8F-pBEeWxqlwqFyTkS7Q)

David, thanks for answering to my feedback!

Let's say Question 7 is a mystery do you agree? =) I've tried at least 6 different ways to answer this question, none of them where considered correct. But I still think that the first one (the most obvious one, considering the lecture video and previous knowledge) was the right one.

Questions 11 and 12 are exactly the way you explained... but the problem is that my first answer was correct (doing what you explained), the second one was not, the third was correct again... every time with the same numbers. Something you can try is to use 4 digits, that worked for me.

The thing here is that the auto-grader is giving different feedback with the same answers. You should try again to submit the right answer to questions 11 and 12, in some point it is going to be right...

Seriously... I am very confused about all of this... mostly because this is not helping me to understand properly the concepts of the lectures.

Thanks again! You are been very helpful with all this issues!

Regards,

Augusto

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ZB (/learn/inferential-statistics/profiles/3cdb3ac214a020ebfbe64f1e50b03eac)

Zara Bamdad Teaching Staff · a day ago (/learn/inferential-statistics/discussions/5OAu6N8WEeWd6hLHI8FYwQ/replies/s6uB5N-ZEeWnYQ5EMRsIgw/comments/ehIRF-FiEeWnSg7Jd1dn3w)

Hi Ignacio + David,

I'm really sorry you had to do those questions so many times! Thank you so much for giving us this feedback. We had another look into it and I think we've solved the problems.

The autograder was changed to be more lenient, but in doing this it seemed to cause problems with decimal places (e.g. you would be penalised if you put a '0' at the end). It should be OK now.

If you can face doing the quiz again you should get more reliable feedback :)

Best,

Zara

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Ignacio Augusto Damboriana · 21 hours ago (/learn/inferential-statistics/discussions/5OAu6N8WEeWd6hLHI8FYwQ/replies/s6uB5N-ZEeWnYQ5EMRsIgw/comments/FLULdeE6EeWmCgoFfSre2Q)

Zara, thanks again for your feedback!! I've tried again a few minutes ago, but it is still not working Question 7.

I did the proportion of nightmares given no-clowns minus the proportion of nightmares given clowns, what we expect to be a negative number... did not work.

Could it be that the negative symbol is what is making the auto-grader work in a wrong way??

I really don't think that I have a wrong answer... can you check the answers within your Coursera profile?? If you see wrong answers you would give as a better feedback... but if you don't, we can all conclude that the problem is the auto-grader...

Thanks again!!

Regards,

Augusto

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david scott · 20 hours ago (/learn/inferential-statistics/discussions/5OAu6N8WEeWd6hLHI8FYwQ/replies/s6uB5N-ZEeWnYQ5EMRsIgw/comments/GJdUc-FCEeWSpwqE05hQoQ)

I agree with Augusto that Question 7 is a mystery. If the question is asking for a Z-score, there are only two options (same number, with a leading "-" or without). Neither auto-grades correct.

I was originally concerned that I may have hand-calculated wrong, so I looked online. I get the same answer when running the R function for the parametric approach at http://www.r-bloggers.com/comparison-of-two-proportions-parametric-z-test-and-non-parametric-chi-squared-methods/ (http://www.r-bloggers.com/comparison-of-two-proportions-parametric-z-test-and-non-parametric-chi-squared-methods/)

The same answer is provided by an online calculator at (http://www.socscistatistics.com/tests/ztest/)http://www.socscistatistics.com/tests/ztest/ (http://www.socscistatistics.com/tests/ztest/)

That answer, whether the plus or minus version, is not accepted by the auto-grader. I am using x1=12, x2=30, n1=47, n2=38 for all calculations.

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Maria St Ivanova · 19 hours ago (/learn/inferential-statistics/discussions/5OAu6N8WEeWd6hLHI8FYwQ/replies/s6uB5N-ZEeWnYQ5EMRsIgw/comments/SEPITOFGEeWUBxLIsRX_2w)

(/learn/inferential-statistics/profiles/8675e72db6f15b04215bc9ecc3b577b0)

I read all your discussions, redid the quiz with 3 decimal places, Q14 I did just replicating what I saw in the video, and the only problematic question remais Question 7.

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AJ

Anita Janghorban · 4 hours ago (/learn/inferential-statistics/discussions/5OAu6N8WEeWd6hLHI8FYwQ/replies/s6uB5N-ZEeWnYQ5EMRsIgw/comments/zSuE6-HLEeWkNw7bGPYHLw)

(/learn/inferential-statistics/profiles/ff23b6a4e0ba41c7d8701ea6a9e25304)

I agree that question 7 is a mystery, I had the same problem and tried it couple of times and could not get it right. at the end I used R to do the z-test to make sure that the decimals will be correct and still it does not accept my answer. I got all the other questions right. not sure what is wrong with it.

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SD

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