question **49** views

question on week 7 comprehension check - confidence interval section

I was not sure how to arrive at this answer after taking notes on the video. If someone can help, I would appreciate it. Thanks.

1c. How much variation should we expect in sample means given a sample size of 36? In other words, what is the value of the standard error?
0.37 2.17 2.17 - correct 2.90 7.29

comprehension_check7

8 days ago by Karen West

the students' answer, *where students collectively construct a single answer*

Also - I'm not sure what concept I'm forgetting here, but I did not arrive at this answer correctly either, if anyone can help! Thanks.

1d. What is the z-score of our sample mean in the sampling distribution given sample sizes of 36? *(Round to 2 decimal places.)*
-1.19 0.23 1.38 1.38 - correct 2.54

8 days ago by Karen West

followup discussions *for lingering questions and comments*

Resolved

Unresolved

Karen West 8 days ago
I'm doing terrible on the confidence interval comprehension check - should I go back and read the reading material again?
I have notes from the video but I'm not getting these correct.

I got this one incorrect too if anyone can help or point me where to go to re-read or watch this material.
I took very good notes on the video, so I'm guessing it would be to go back to the reading material, or a prior week's material?

1e. What is the probability of observing our sample mean, or one that is larger, when the true population mean is 74 beats per minute?
0.0002 0.0838 0.0838 - correct 0.2146 0.9127

Resolved

Unresolved

Karen West 8 days ago

I understand how to come to this answer: Mean = 1.96 * (13/6) = 4.25, and add and subtract 4.25 from 77 to construct the confidence interval range around the sample mean - but I honestly do not understand why this gives the range of the answer, if someone can help, or point me to where I can better understand. Thank you!

1f. Construct a 95% confidence interval around your sample mean of 77 beats per minute using this formula:

$$\text{Mean} = 1.96 \cdot \frac{\sigma}{\sqrt{n}}$$

(1/1 point)
What are the bounds of the 95% confidence interval?
(59.40, 92.40) (69.45, 78.75) (72.75, 81.25) (72.75, 81.25) - correct (74.15, 75.85)

Resolved

Unresolved

Karen West 8 days ago
I should have posted this as a follow up discussion earlier - I instead posted it in the student answer section by mistake.

Also - I'm not sure what concept I'm forgetting here, but I did not arrive at this answer correctly either, if anyone can help! Thanks.

1d. What is the z-score of our sample mean in the sampling distribution given sample sizes of 36? *(Round to 2 decimal places.)*
-1.19 0.23 1.38 1.38 - correct 2.54

Anonymous 8 days ago Use the standard error calculated in 1c to calculate a z-score. The concept is that, when you take many samples of say size 36, they will cluster around/near the population mean. They will form a normal distribution, but with a tighter deviation (standard error) than the population deviation. So question 1d is asking for the z-score of a sample of size 36 of 77 bpm versus the population mean of 74.

Karen West 8 days ago Thank you for your response, but perhaps I will have to participate in next week's final online session with the class which I've never done before, since I'm not getting it. The problem is that the class is ending next week so I may not make it if I wait until then.
Thanks anyway though for trying to help. I have a bunch of questions above as you may have noticed on this topic.

Anonymous 8 days ago Hi Karen, you should probably read Chapter 11 on Sampling Distribution and Estimation.

Karen West 8 days ago Thanks - I'll read that again.

Karen West 8 days ago I did just look at chapter 11 on sampling distribution and estimation again, along with Chapter 4 from week 2 on Z scoring, and still getting some wrong.
I'll post this conversation and see if I can participate in next week's chat session to see if I can get help there instead I guess.
I have to move on or there's no chance of finishing this class on time for me. It's never fun to have wasted your time doing something just not to finish it off, so I'll move on to the next thing and hopefully come back and get help if I need it.
Or perhaps I'll just end up dropping the course and taking at some other time when I'm not so far behind.
We'll see.

Resolved

Unresolved

Karen West 8 days ago
2b. If the standard deviation reported by the yogurt industry is 48.5 calories, how much variation should we expect between sample means for samples of size 14? *(Round to 2 decimal places.)*

Anonymous 8 days ago this requires that you understand what standard error is. SE = sd/sqrt(N)

Karen West 8 days ago That did help - thank you.