Week 3 Lab

Quiz, 7 questions

✖ Try again once you are ready.

Required to pass: 80% or higher

You can retake this quiz up to 3 times every 8 hours.

Back to Week 3

Retake

✔ 1 / 1 points

1.
There are 1,000 cases in this data set, what do the cases represent?

- The hospitals where the births took place
- The days of the births
- The fathers of the children
- The births

Correct

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1 / 1 points

2.

How many mothers are we missing weight gain data from?

- 0
- 13
- 27

Correct

- 31

0 / 1 points

3.

Make side-by-side boxplots of habit and weight. Which of the following is false about the relationship between habit and weight?

- Both distributions are extremely right skewed.
- Range of birth weights of babies born to non-smoker mothers is greater than that of babies born to smoker mothers.
- Median birth weight of babies born to non-smoker mothers is slightly higher than that of babies born to smoker mothers.

This should not be selected

- The IQRs of the distributions are roughly equal.

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1 / 1 points

4. What are the hypotheses for testing if the average weights of babies born to smoking and non-smoking mothers are different?

- $H_0 : \mu_{smoking} = \mu_{non-smoking}$

  $H_A : \mu_{smoking} > \mu_{non-smoking}$

- $H_0 : \mu_{smoking} = \mu_{non-smoking}$

  $H_A : \mu_{smoking} \neq \mu_{non-smoking}$

Correct

- $H_0 : \bar{x}_{smoking} = \bar{x}_{non-smoking}$

  $H_A : \bar{x}_{smoking} \neq \bar{x}_{non-smoking}$

- $H_0 : \bar{x}_{smoking} = \bar{x}_{non-smoking}$

  $H_A : \bar{x}_{smoking} > \bar{x}_{non-smoking}$

- $H_0 : \mu_{smoking} \neq \mu_{non-smoking}$

  $H_A : \mu_{smoking} = \mu_{non-smoking}$

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1 / 1 points

5.

Change the type argument to "ci" to construct and record a confidence interval for the difference between the weights of babies born to smoking and non- smoking mothers. Which of the following is the best interpretation of the interval?

- We are 95% confident that babies born to nonsmoker mothers are on average 0.05 to 0.58 pounds lighter at birth than babies born to smoker mothers.
- We are 95% confident that the difference in average weights of babies whose moms are smokers and nonsmokers is between 0.05 to 0.58 pounds.
- We are 95% confident that the difference in average weights of babies in this sample whose moms are smokers and nonsmokers is between 0.05 to 0.58 pounds.
- We are 95% confident that babies born to nonsmoker mothers are on average 0.05 to 0.58 pounds heavier at birth than babies born to smoker mothers.

Correct

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0 / 1 points

6.

Calculate a 99% confidence interval for the average length of pregnancies (`weeks`). Note that since you're doing inference on a single population parameter, there is no explanatory variable, so you can omit the `x` variable from the function. Which of the following is correct interval?

- (38.0952 , 38.5742)
- (38.0892 , 38.5661)
- (6.9779 , 7.2241)

This should not be selected

- (38.1526 , 38.5168)

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1 / 1 points

7.

Now, a non-inference task: Determine the age cutoff for younger and mature mothers. Use a method of your choice. What is the maximum age of a younger mom and the minimum age of a mature mom, according to the data?

- The maximum age of younger moms is 32 and minimum age of mature moms is 33.
- The maximum age of younger moms is 34 and minimum age of mature moms is 35.

Correct

- The maximum age of younger moms is 35 and minimum age of mature moms is 36.
- The maximum age of younger moms is 33 and minimum age of mature moms is 34.