Rubric for Inference

This is the R Markdown outline for running inference, both a hypothesis test and a confidence interval.

Exploratory data analysis

Use data documentaton (help files, code books, Google, etc.), the str command, and other summary functions to understand the data.

ANSWER

```
# Add code here to understand the data.
```

Prepare the data for analysis. [Not always necessary.]

ANSWER

```
# Add code here to prepare the data for analysis.
```

Make tables or plots to explore the data visually.

ANSWER

```
# Add code here to make tables or plots.
```

Hypotheses

Identify the sample (or samples) and a reasonable population (or populations) of interest.

ANSWER

Please write up your answer here.

Express the null and alternative hypotheses as contextually meaningful full sentences.

ANSWER

H_0: Null hypothesis goes here.

H_A: Alternative hypothesis goes here.

Express the null and alternative hypotheses in symbols (when possible).

ANSWER

$H_0 : math$

$H_A : math$

Model

Identify the sampling distribution model.

ANSWER

Please write up your answer here.

Check the relevant conditions to ensure that model assumptions are met.

ANSWER

Please write up your answer here. (Some conditions may require R code as well.)

Mechanics

Compute the test statistic.

ANSWER

```
# Add code here to compute the test statistic.
```

Plot the null distribution.

ANSWER

```
# Add code here to plot the null distribution.
```

Calculate the P-value.

ANSWER

```
# Add code here to calculate the P-value.
```

Conclusion

State the statistical conclusion.

ANSWER

Please write up your answer here.

State (but do not overstate) a contextually meaningful conclusion.

ANSWER

Please write up your answer here.

Identify the possibility of either a Type I or Type II error and state what making such an error means in the context of the hypotheses.

ANSWER

Please write up your answer here.

Confidence interval

Check the relevant conditions to ensure that model assumptions are met.

ANSWER

Please write up your answer here. (Some conditions may require R code as well.)

Calculate the confidence interval.

ANSWER

```
# Add code here to calculate the confidence interval.
```

State (but do not overstate) a contextually meaningful interpretation.

ANSWER

Please write up your answer here.