



Apply Statistical Methods in Making Formal Inferences

Achieved	Merit	Excellence
Use statistical methods to make a formal inference.	Use statistical methods to make a formal inference, with justification.	Use statistical methods to make a formal inference, with statistical insight.
<p><u>Justification</u> - Involves linking components of the statistical enquiry cycle to the context, and referring to evidence such as statistics, data values, trends, or features of visual displays in support of statements made.</p>		
<p><u>Statistical Insight</u> - Involves integrating statistical and contextual knowledge throughout the statistical enquiry cycle, and may include reflecting about the process; considering other relevant variables; evaluating the adequacy of any models; or showing a deeper understanding of models.</p>		

Statistical Enquiry Cycle

The methods included in this standard are related to:

- Posing a comparison investigative question using a given multivariate data set
- Selecting and using appropriate displays and summary statistics
- Discussing sample distributions
- Discussing sampling variability, including the variability of estimates
- Making an appropriate formal statistical inference
- Communicating findings in a conclusion

Problems

The problems will involve using the statistical enquiry cycle to make a formal inference, in both real-life and mathematical contexts.

Key Vocabulary

Students are expected to understand and use terms related to Inferences methods, such as:

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| <input type="checkbox"/> Statistical inference | <input type="checkbox"/> Sample distribution | <input type="checkbox"/> Statistical estimate |
| <input type="checkbox"/> Multivariate data | <input type="checkbox"/> Sampling variability | <input type="checkbox"/> Summary statistic |
| <input type="checkbox"/> Confidence interval | <input type="checkbox"/> Hypothesis test | |