

# Cornell Guided Notes

Biotechnology for Health (Biomedical Innovations) | 2027-03-01

Name

Period

Date

Lesson

## Lesson focus

Mean, SD, t-test

## Key words and questions

## Prepared details and student notes

**Essential question**  
**What is today's target?**

Compute the mean and standard deviation and explain the purpose of a t-test for your data. Big idea: Summary statistics describe your data honestly; a t-test asks whether the difference you observed is large enough to trust -- both skills are required before drawing any conclusion.

**My notes, examples, and questions**

**Key words**  
**What vocabulary unlocks the lesson?**

- sample size
- mean
- standard deviation
- t-test
- validity
- reliability

**My notes, examples, and questions**

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## Cornell Notes - Continued

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**Must-know ideas**  
**What should I understand by the end?**

- How to compute the mean and standard deviation for a dataset by hand or in a spreadsheet.
- What a t-test compares and the specific circumstances that call for it.
- Why standard deviation tells you something about data reliability that the mean alone cannot.

**My notes, examples, and questions**

**Process notes**  
**What happens during class?**

- 0-10: Review mean and standard deviation formulas with a small sample dataset
- 10-30: Calculate the mean of each condition in your dataset -- show all steps
- 30-50: Calculate the standard deviation for each condition -- show all steps
- 50-65: Explain what a t-test compares and when to use it; identify whether your data calls for one
- 65-77: Submit statistics practice with calculations shown
- 77-80: Exit check: what does a large standard deviation tell you about your data?

**My notes, examples, and questions**

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#### Steps and evidence What do I do and turn in?

- Calculate the mean of each condition in your dataset.
- Calculate the standard deviation to describe spread.
- Explain what a t-test compares and when to use it.
- Identify whether your data would call for a t-test.
- Submit your statistics practice with calculations shown.

Evidence: Data table - Statistics practice: mean and standard deviation calculated for each condition with steps shown, plus a written explanation of what a t-test compares and whether it applies to the data.

#### My notes, examples, and questions

#### Checks for understanding How do I know I got it?

- You can compute mean and standard deviation correctly.
- You can explain the purpose of a t-test.

#### My notes, examples, and questions

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**Lab or safety notes**  
**What must I handle carefully?**

Supplies:

- Heart-rate or pulse sensor
- Lab computer or tablet with spreadsheet software
- Stopwatch or timer
- Data collection sheet
- Calculator
- Cleaning wipes for shared sensors

**My notes, examples, and questions**

### Summary

Today's lesson focused on Mean, SD, t-test. The main target was: Compute the mean and standard deviation and explain the purpose of a t-test for your data. The evidence of learning is Data table: Statistics practice: mean and standard deviation calculated for each condition with steps shown, plus a written explanation of what a t-test compares and whether it applies to the data.. In my own words, the most important idea from today is:

**My summary**

### My final question or connection