

Exploring and Making Conjectures: Sums of Consecutive Integers

Math 210, C. Wells

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Objective

THE LEARNER WILL **explore** a numerical situation, look for patterns, and make and effectively **communicate** predictions or **conjectures** about the observed behavior.

Procedure

- Calculate $29 + 30 + 31$.
- Calculate $21 + 22 + 23 + 24$.
- Add up the numbers from 16 to 20. That is, calculate $16 + 17 + 18 + 19 + 20$.
- Add up the numbers from 6 to 14.
- Calculate the sums of other sequences of consecutive integers.

Questions

- What pattern(s) do you observe?
- Can you extend any of the patterns?
- How would you describe or explain the patterns?
- Is there anything special about any of the numbers?
- What questions do the patterns raise for you? What else would you like to know?