

# Discrete Mathematics for Computer Science

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# What is Discrete Mathematics?

## Definition (Discrete mathematics)

*Discrete mathematics*: study of countable, distinct, or separate mathematical structures.

## Example (Pixel)

Phones, computer monitors, televisions, modern screens, & Disney cartoons, animated films for kids & for adults, e.g., Rick & Morty.

# Some Critical Thinking Questions

Some purpose-driven questions:

- Why do undergraduate or graduate students need to learn mathematics?
- Which type of mathematics do undergraduate or graduate students need to learn?
- Why do CS-major students need to study Discrete Mathematics?

# Motivations

# References

- GKP89 RONALD L. GRAHAM, DONALD ERWIN KNUTH, OREN PATASHMIK. *Concrete Mathematics: A Foundation for Computer Science*. 2e.
- WR21 RYAN T. WHITE, ARCHANA TIKAYAT RAY. *Practical Discrete Mathematics: Discover math principles that fuel algorithms for computer science & machine learning with Python*.