On Beyond Calculus

Rebekah Yates

Houghton College, Houghton, NY

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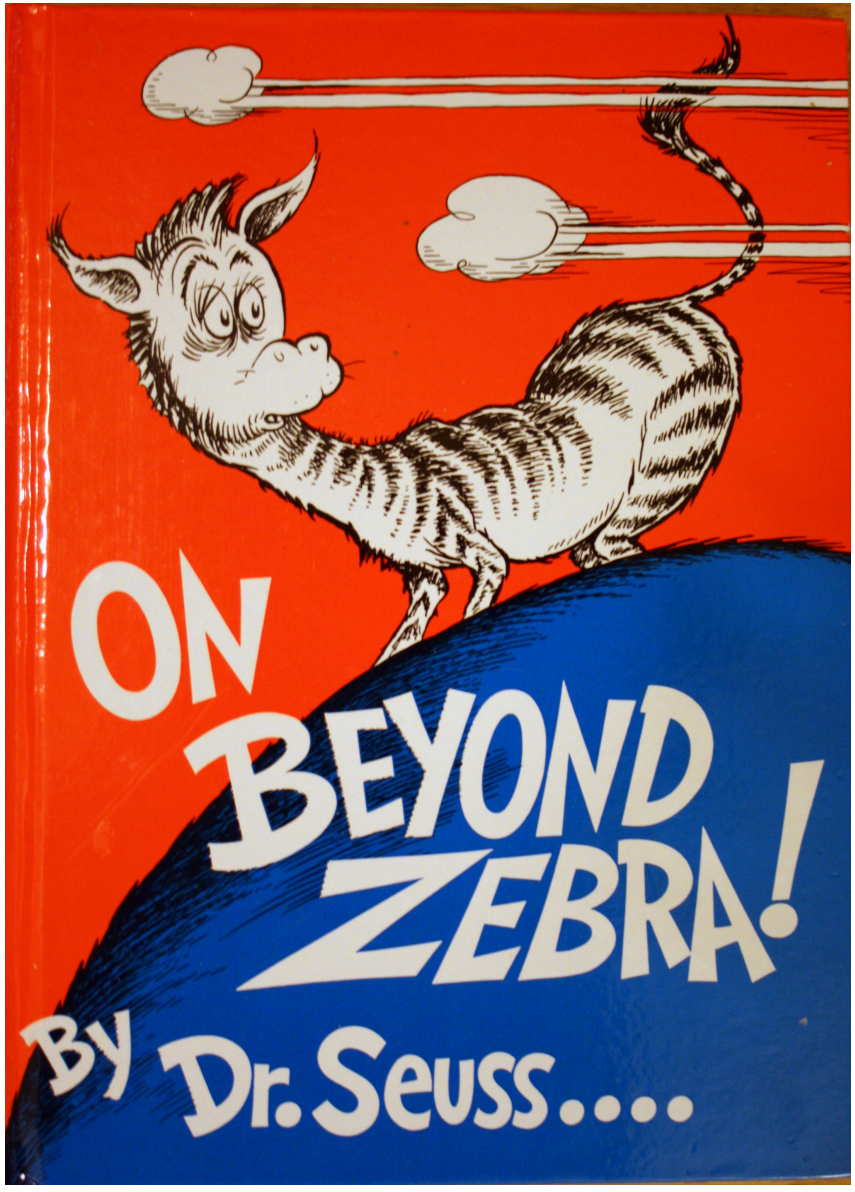

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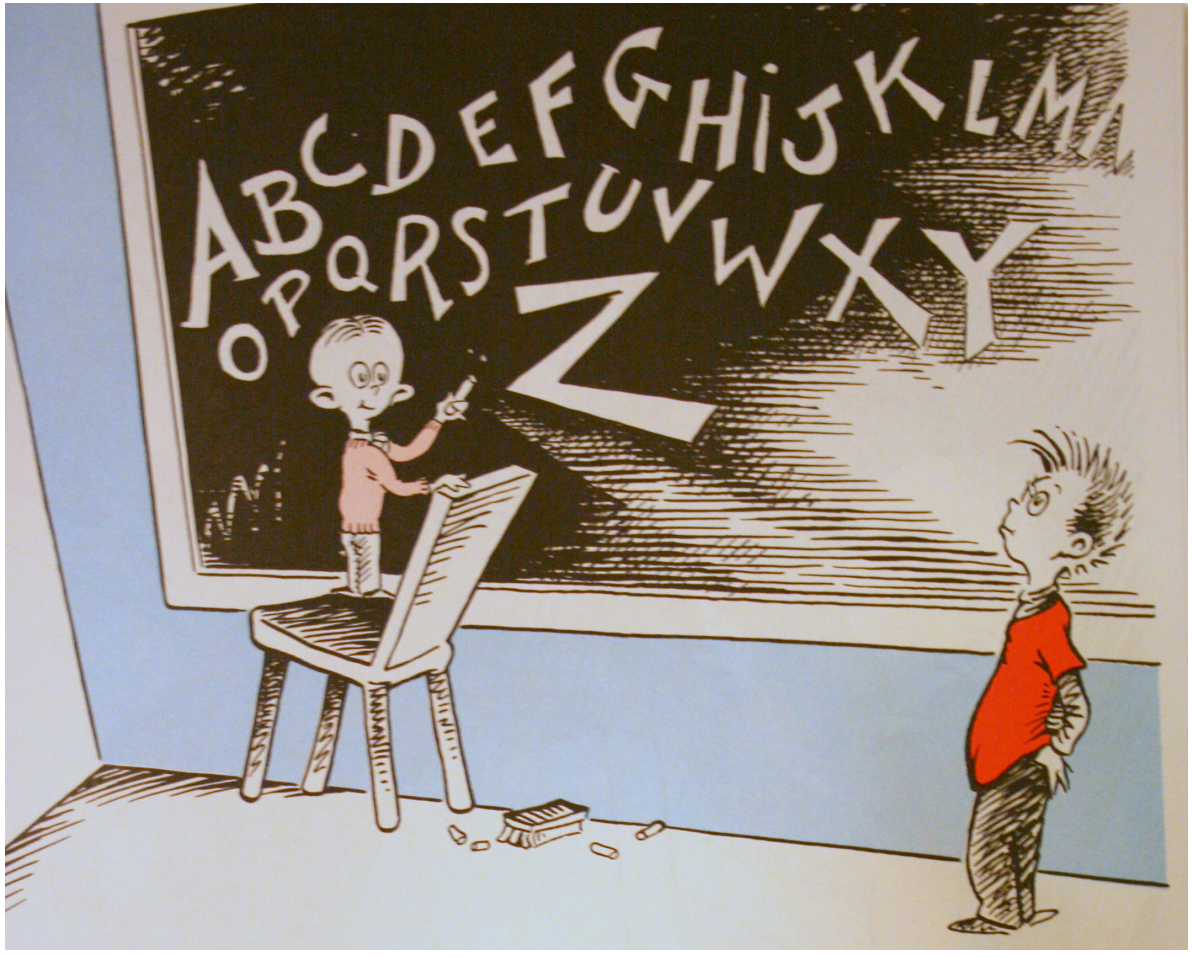

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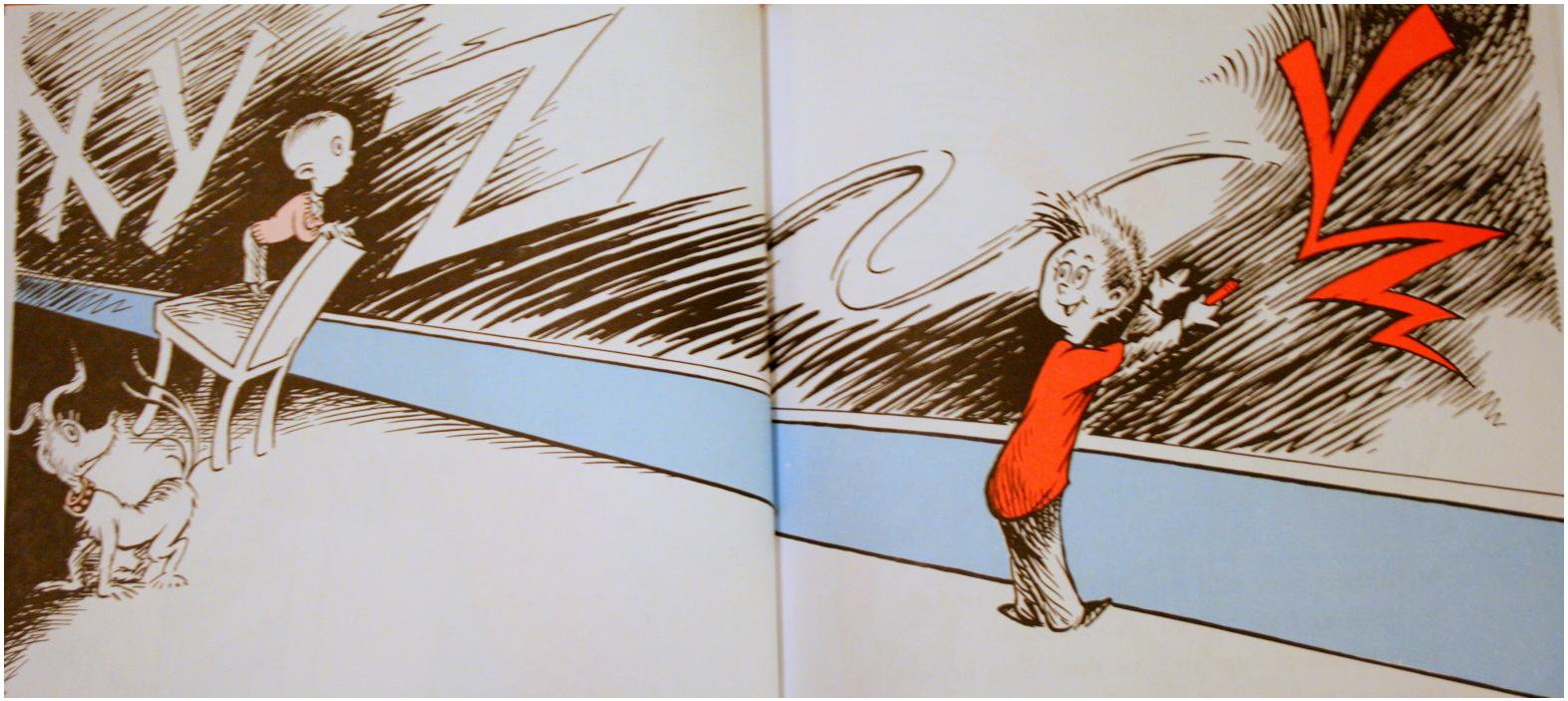

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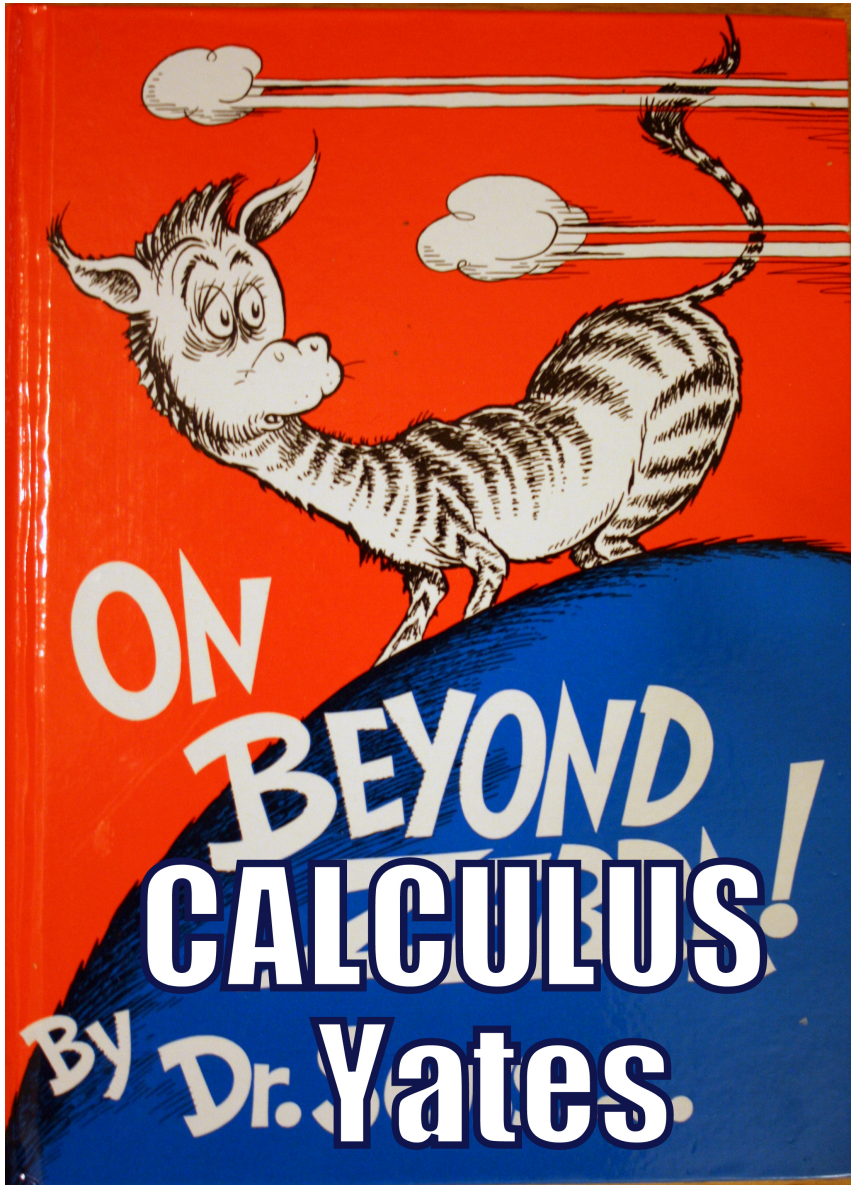

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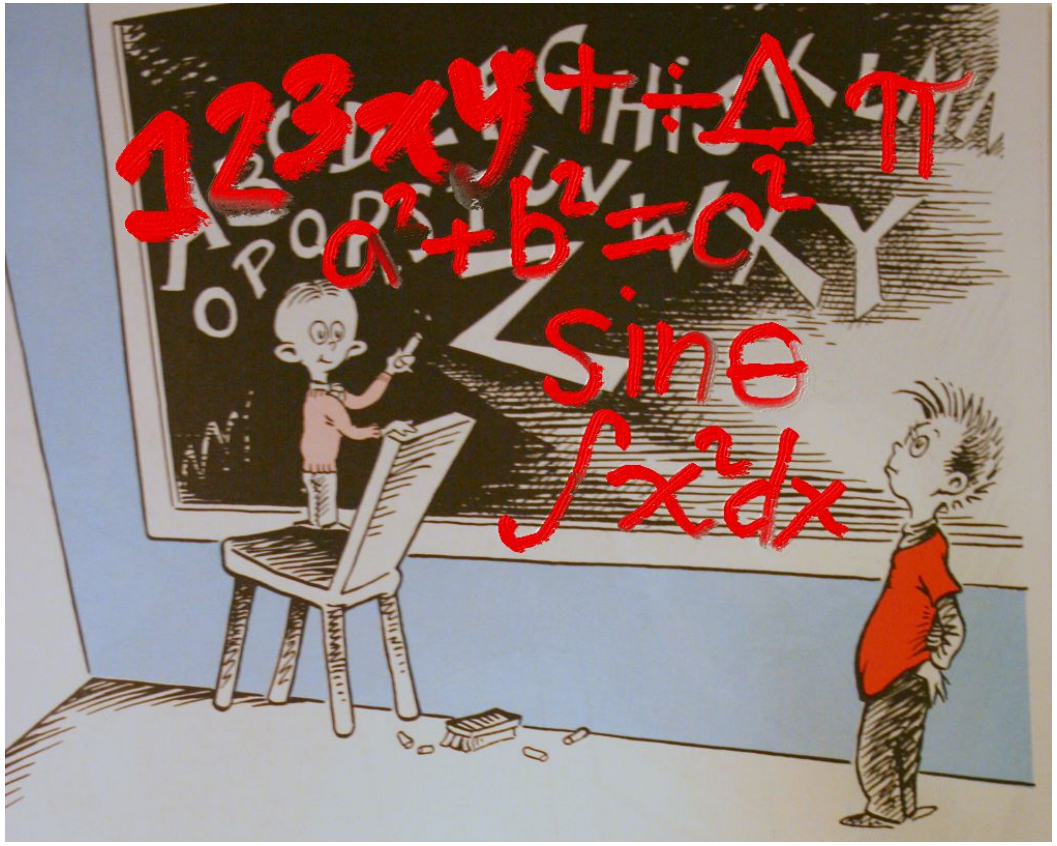

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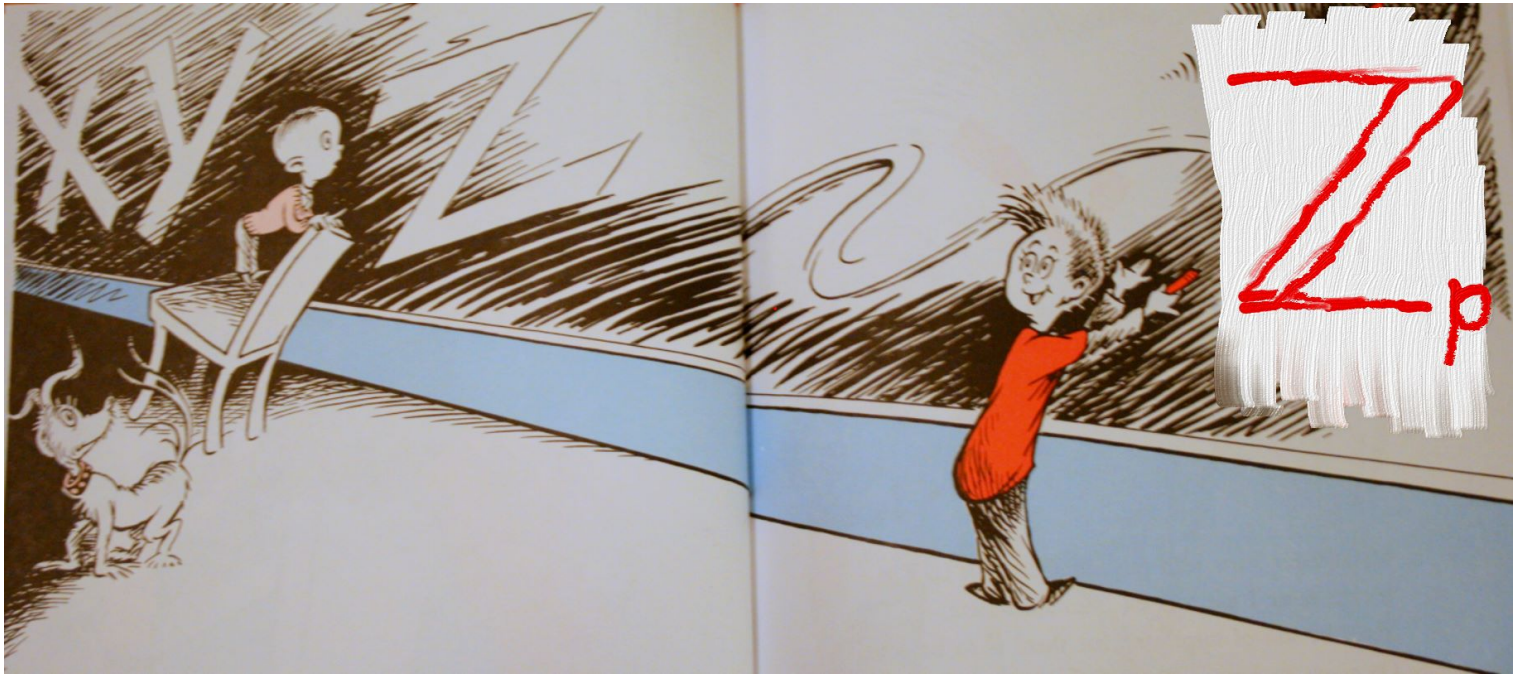

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Houghton Math and Science Day

- Using Math to Win Games
- The Impossibility of Fairness: The Mathematics of Voting
- Sizzling Sierpinski! Patterns of Punctured Pyramids and other Fun Fractals!
- Keep Your Secrets Safe with Math (Cryptography)
- **To Infinity and Beyond**
- Getting an Angle on the Area of Spherical Triangles
- **The Road Best Traveled: The Mathematics of Getting There and Back Again**
- The GOLD Standard of Beauty According to a Mathematician

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To Infinity and Beyond

- finiteness and one-to-one correspondence
- infiniteness
- cardinality
- examples of countably infinite sets
- proof that the reals are uncountable
- quick history of Cantor

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Introduction to Graph Theory

The Road Best Traveled: The Mathematics of Getting There and Back Again

- Bridges of Königsberg
- Hamiltonian circuits
- Traveling Salesperson Problem
- Algorithms: Nearest Neighbor, Sorted Edges, Brute Force

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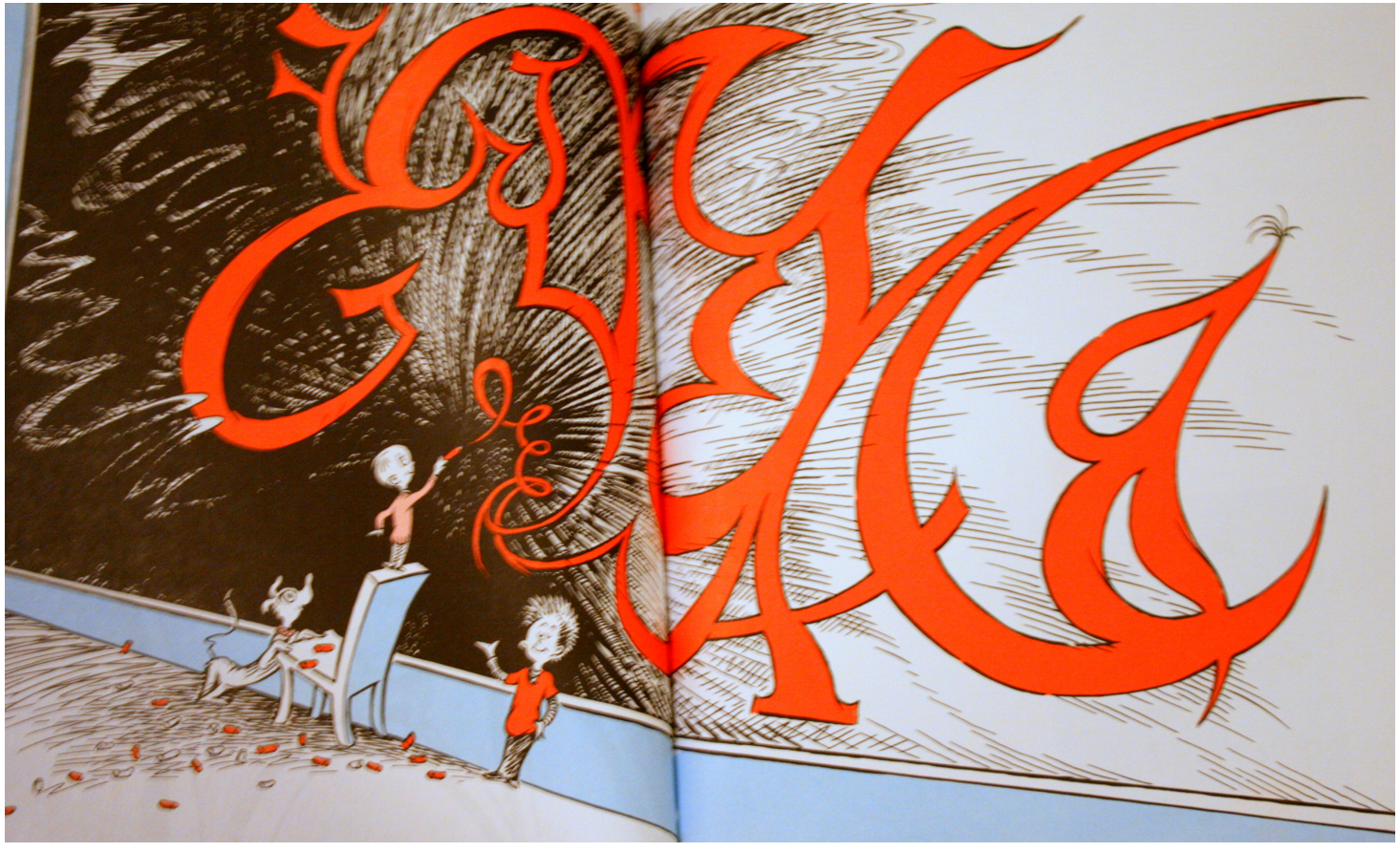
So on beyond Calculus!



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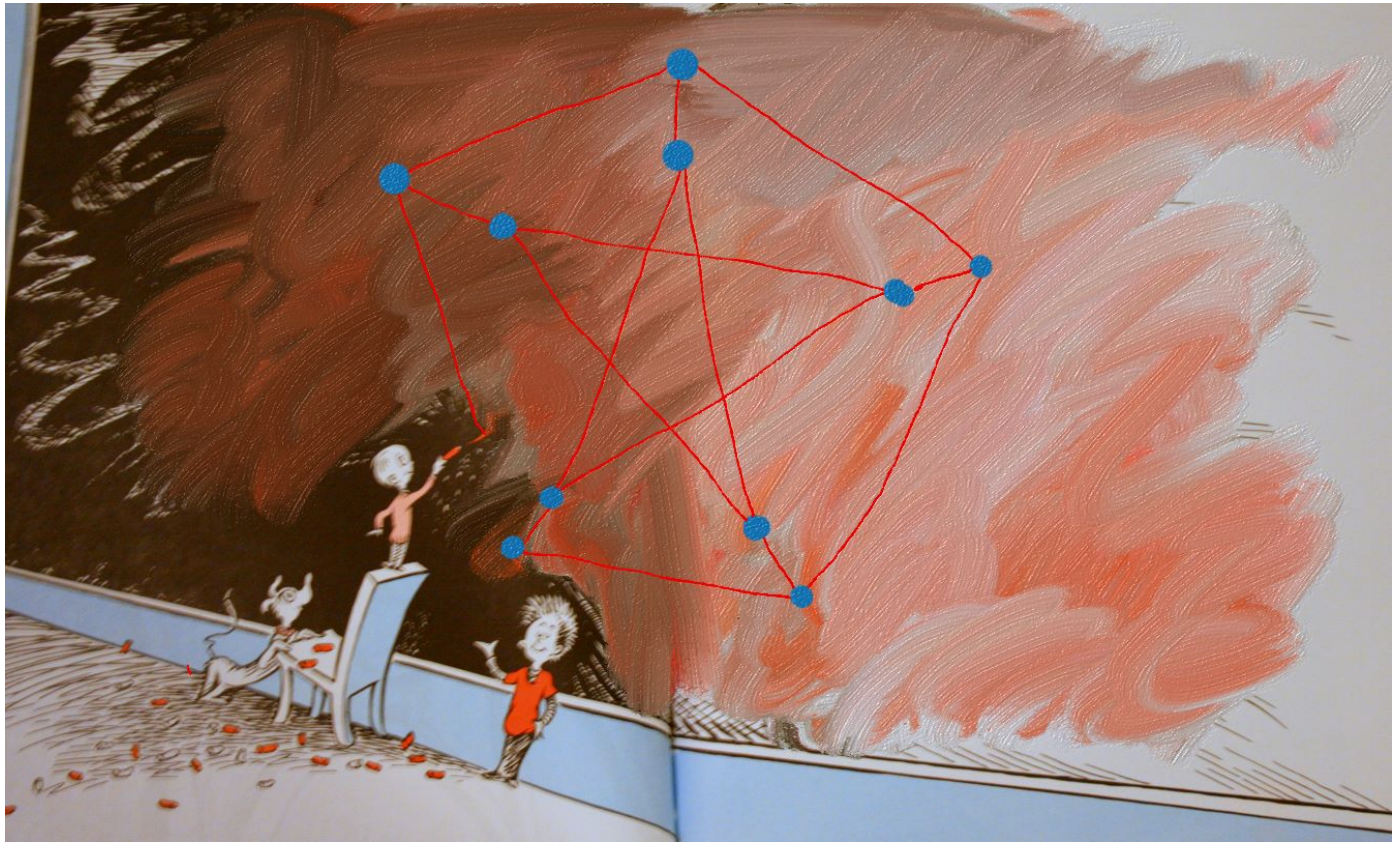
So on beyond Calculus!



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Thanks!

Slides and handouts can be found at
`www.houghton.edu/rebekah-yates`
on the Research tab

email: `rebekah.yates@houghton.edu`

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