

## Euclid: A “Mathematically Optimized Measuring Cup”

As we are coming off of a busy week – midterms, course registration, and *elections* – for those needing a little breather, a little (math-related!) entertainment, here’s a fun little article, and a new product, demonstrating an interesting use of calculus. The piece below, by Emma Taggart, published on mymodernmet.com on October 4, 2017, describes what is claimed to be a better measuring cup.

### Ex-Google Engineer Designs Mathematically Optimized Measuring Cup

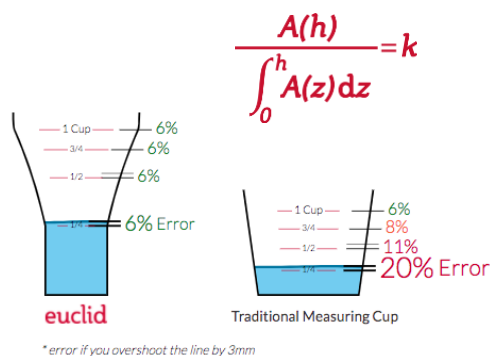
*If you’ve ever had a failed culinary endeavor, you’ll know that accuracy is key when measuring your ingredients. Whether you’re baking, cooking, or brewing, the correct amount of each component can make or break the final outcome. Inaccurate measuring is not always due to human error though. There is but another culprit, silently plotting against you: the humble measuring cup.*

*Four years ago, while cooking in his kitchen, Joshua Redstone came to the realization that basic liquid measuring cups have high margins of error because of their straight, untapered shape. He began wondering “why [do] small measuring cups seem better than large ones at measuring small amounts?” He came to the realization that the shape of a measuring cup can directly affect its accuracy. Having worked for Facebook and Google as a software engineer for ten years, he saw the math challenge and couldn’t resist.*

*Enter Euclid: a new, more accurate measuring cup. Named after the ancient Greek mathematician, often referred to as the “founding father of geometry,” the cup’s “mathematically optimal, tapered design” measures small amounts of liquid just as accurately as large amounts. This is because “Euclid’s shape preserves the ratio of surface area to volume as you measure more or less and so the ratio of extra volume to desired volume also does not change,” Redstone explains. It took Redstone four months to complete the math, a year to develop the first prototype, and then a further two years to refine manufacturing details.*

*Now, after a successful Kickstarter campaign, which succeeded its \$30,000 goal, Redstone’s clever invention has become a reality. “I’m totally rocked,” he excitedly announced. “I’m still trying to wrap my head around the fact that a math insight in the kitchen 4+ years ago is going to become a real product.” ...*

If you are interested, visit <https://euclidmeasuring.com/>. The Math Department has no ties or financial interest in this product!



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