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John A Rock* (jarock@cpp.edu), Mathematics and Statistics, Cal Poly Pomona, 3801 W Temple Ave, Pomona, CA 91768. *A Fool's Errand: Defining "Fractal"*.

Merriam-Webster defines the word fractal as a noun meaning “any of various extremely irregular curves or shapes for which any suitably chosen part is similar in shape to a given larger or smaller part when magnified or reduced to the same size”, but this definition may disappoint a mathematician. It’s simply too subjective. How can one use this definition to check whether a given object is a fractal or not? The word appears in wide array of mathematical papers with topics ranging from number theory to dynamical systems to, well, you name it. However, there is no technical definition that is commonly accepted by the mathematical community. In this talk, which is suitable for those new to the subject, we will explore a small variety of mathematical objects which are commonly thought of fractals along with some proposed definitions, including Mandelbrot’s original definition, and investigate possible pitfalls. (Received January 27, 2019)