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Jeffrey C Lagarias* (lagarias@umich.edu), Dept. of Mathematics, Univ. of Michigan, 530 Church Street, Ann Arbor, MI 48109-1043. *Generalized Farey Sequences*. Preliminary report.

Generalized Farey Sequences are sequences $\{G_n : n \geq 1\}$ consisting of finite sets of rational numbers, in which $G_0 = \{\frac{0}{1}, \frac{1}{1}\}$ and each sequence G_n is obtained from the preceding one G_{n-1} by splitting certain of the subintervals that it determines at their mediants. The usual Farey sequence and the Farey tree (at level n) are special cases of this general construction. We study various limiting statistical properties of the resulting sequences, scaled by their cardinalities. (Received September 21, 2018)