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Drew Armstrong* (armstrong@math.miami.edu), Department of Mathematics, University of Miami, Coral Gables, FL 33146. *Rational Catalan Combinatorics*. Preliminary report.

Given a positive rational number $a/b \in \mathbb{Q}$ in lowest terms, we define the **rational Catalan number**:

$$\text{Cat}(a/b) := \frac{1}{a+b} \binom{2a+b-1}{a}.$$

Note that $\text{Cat}(n/1)$ is familiar. We will show through examples that there is a rich theory of “rational Catalan combinatorics” waiting to be explored. (Received September 21, 2011)