



## RATIONAL SUMS

### Why

We want to add rationals.<sup>1</sup>

### Definition

Let  $[(a, b)], [(b, c)] \in \mathbf{Q}$ . The *rational sum* of  $[(a, b)]$  with  $[(b, c)]$  is  $[(ad + bc, bd)]$ .<sup>2</sup>

### Notation

We denote the rational sum of  $q, r \in \mathbf{Q}$  by  $q + r$ .

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<sup>1</sup>Future editions will expand on this why.

<sup>2</sup>An account that this is well-defined will appear in future editions.



