



INTEGER SUMS

Why

We want sums to follow those of natural numbers.¹

Definition

Consider $[(a, b)], [(b, c)] \in \mathbf{Z}$. We define the *integer sum* of $[(a, b)]$ with $[(b, c)]$ as $[(a + c, b + d)]$.²

Notation

We denote the sum of $[(a, b)]$ and $[(c, d)]$ by $[(a, b)] + [(b, c)]$. So if $x, y \in \mathbf{Z}$ then the sum of x and y is $x + y$.

¹Future editions will modify this.

²One needs to show that this is well-defined. The account will appear in future editions.

