

## Natural Products

## 1 Why

TODO

## 2 Definition

Let m and n naturals. If we add n copies of m we obtain a number. If we add m copies of n we obtain a number. Indeed, we obtain the same number in both cases. We call this number the **product** of m and n. We say we **multiply** m to n, or vice versa. We call this symmetric operation mapping (m, n) to their product **multiplication**.

## 2.1 Notation

We denote the operation of multiplication by  $\cdot$  and so denote the product of the naturals m and n by  $m \cdot n$ .