



# Natural Multiplication

## 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  $m \cdot n$ .