

# 1 Plustorial

The *plustorial* (German: *Die Plusultät*) of a number is defined as follows:

$$n? := \sum_{i=1}^n i \quad (n \in \mathbb{Z}) \qquad n? = \sum_{i=1}^n i = \frac{n(n-1)}{2}$$

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## 2 Closed Interval

The alternate notation for a closed interval over a set  $K \subseteq \mathbb{K}$ , which has the comparison operator  $\leq$  defined for every elements  $k, l \in K$ , can be written as follows:

$$\langle k, l \rangle := \begin{cases} [k, l], & \text{if } k \leq l \\ [l, k], & \text{otherwise} \end{cases} \qquad l, k \in K \subseteq \mathbb{K}$$
$$\langle \pm k \rangle := [-k, k]$$

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## 3 Set with a finite amount of elements

Let  $K$  be the subset of the field  $\mathbb{K}$  and let  $f : K \rightarrow \mathbb{B}$  be a function, which defines for every element  $k \in \mathbb{K}$ , whether it is also an element of the subset  $K$ .

$$\forall k \in \mathbb{K} : f(k) \Leftrightarrow k \in K$$

Based on the equation above, the subset  $K$  can now be re-defined as follows:

$$K = \{k \in \mathbb{K} \mid f(k)\} \subset \mathbb{K}$$

The following notation can be used to indicate, that the subset  $K \subset \mathbb{K}$  has only a finite amount of elements  $k$ :

$$\{k \in \mathbb{K} \mid f(k)\}_{\infty}^{<} : \Leftrightarrow |\{k \in \mathbb{K} \mid f(k)\}| < \infty$$

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## 4 Assembler command "ABK"

The i386 assembler command ABK triggers a quadruple-fault, when loaded into the instruction cache during execution and simultaneously short-circuits the machine's DC voltage regulator with the CPU power inlet, causing the CPU to be grilled with with the given DC voltage (usually 240V in Europe). Have Fun!