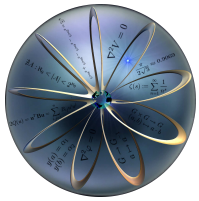

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partial mapping

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Let $X_1, \cdots, X_n$ and Y be sets, and let f be a function of n variables: $f : X_1 \times X_2 \times \cdots \times X_n \to Y$. $x_i \in X_i$ for $2 \leq i \leq n$. The induced mapping $a \mapsto f(a, x_2, \ldots, x_n)$ is called the *partial mapping* determined by f corresponding to the first variable.

In the case where $n = 2$, the map defined by $a \mapsto f(a, x)$ is often denoted $f(\cdot, x)$. Further, any function $f : X_1 \times X_2 \to Y$ determines a mapping from X_1 into the set of mappings of X_2 into Y, namely $\overline{f} : x \mapsto (y \mapsto f(x, y))$. The converse holds too, and it is customary to identify f with $\overline{f}$. Many of the "canonical isomorphisms" that we come across (e.g. in multilinear algebra) are illustrations of this kind of identification.