

## Maps and Products

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**Proposition 0.1.** Let  $A, B, C$  be classes and  $f$  be a map of  $A \times B$ . Assume that  $f(a, b) \in C$  for all  $a \in A$  and all  $b \in B$ . Then  $f$  is a map from  $A \times B$  to  $C$ .

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**Proposition 0.2.** Let  $A, B, C$  be classes and  $f$  be a map from  $A \times B$  to  $C$ . Let  $a \in A$  and  $b \in B$ . Then  $f(a, b) \in C$ .