

Appendix D

Problem Solving

In his *Grundriß der Logik*, Maass gives some sound advice on problem solving in a section on practical logic. It is well worth pondering.

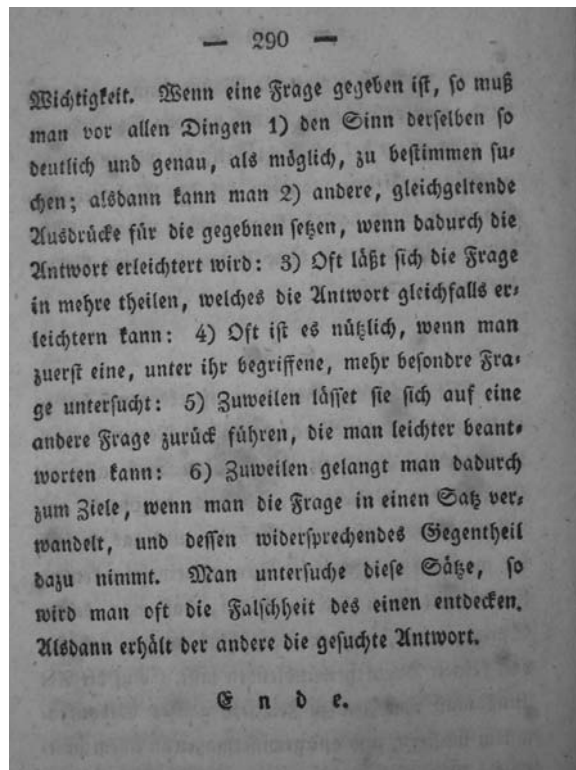


Figure D.1: Extract from Maass' *Grundriß der Logik*

The German text translates as

When given a question, one should first of all 1) determine its meaning as clearly and accurately as possible; then one may 2) replace terms with other terms of the same meaning if this simplifies finding the solution: 3) often, the question can be split into several questions, which can, similarly, simplify finding the answer: 4) it is often helpful to consider a special, more particular, version of the question: 5) sometimes the question can be reduced to another question which is easier to answer: 6) occasionally one obtains a solution by turning the question into a statement, and assuming its negation. On studying the negation one will often discover it is false, which obtains the answer to the original question.