

On the notion of reducibility

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The notion of reducibility is a useful tool to establish hierarchies between the complexity of different problems that arise in mathematics. These hierarchies describe when a problem is simpler than another one, given a class of functions, called *reductions*, to be used for the comparison. Their structure therefore depends on the choice of such reductions. One of the main applications consists in showing that some problems are unsolvable, or intractable, in a precise sense. Purpose of the talk is to give an elementary introduction to the subject and to present some recent work and lines of research.