

# $P \neq NP$

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## 1 Introduction

Many theoretical computer scientists have hypothesized — correctly — that  $P \neq NP$ , but none were able to prove it. At last, that hypothesis is proved correct.

### 1.1 The Class $P$

The class  $P$  consists of all decision problems that can be solved in polynomial time.

### 1.2 The Class $NP$

The class  $NP$  consist of all decision problems that can be solved in nondeterministic polynomial time.

The class  $NP$  contains the class  $P$  and many harder problems.