Michigan Math Club

Thursday at 4pm in the Nesbitt Room
Free Pizza and Pop

The P versus NP Problem

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Abstract for 10 March 2016

Can a computer program solve a problem in an amount of time that is at most a polynomial function of the size of the input data? If we do not succeed in writing such a program, can we prove that one does not exist? A problem is called NP if its answer can at least be checked in polynomial time. The hardest of these problems are called NP-complete, and can be all reduced to one another in polynomial time. Examples include such seemingly unrelated questions as coloring of a graph with a given number of colors or maximally efficient garbage collection. Whether these problems can be actually solved in polynomial time is unknown: it is the greatest open problem of computer science. But people very strongly suspect that it cannot be done.