Verification of the optimality of y^* was achieved by checking that the Hessian matrix was positive definite.

The answer was provided to sixteen decimal places by Gaussian elimination.

Substituting (3) into (7), the integral becomes $\pi^2/6$.

A beautiful and elegant proof of this result was given by C. L. Ever [10].

The most expensive method, i. e., Newton's method, converges quadratically.

The failure of Newton's method to converge is attributed to the fact that the Jacobian is singular at the solution.

This failure of Newton's method to converge can be attributed to the fact that the Jacobian is singular at the solution.

In the fifteen years before Melkman's algorithm from 1987, over a dozen different algorithms for this problem were published, almost half of which were incorrect.

A numerical example is now given to illustrate the above result.

Related work. ... From the theoretical point of view, considering the development of variational integrators, extensions of DMOC to mechanical systems with nonholonomic constraints or to systems with symmetries are quite natural and have already been analyzed in [46,47].

Abstract. We consider the worst-case query complexity of some variants of certain PPAD-complete search problems. Suppose we are given a graph G and a vertex $s \in V(G)$. Let us denote the directed graph obtained from G by directing all edges in both directions by G'. There is a directed path P in G' that is unknown to us, we only know that P starts at s. Our aim is to find the endvertex of P using as few queries as possible using the following type of questions. A question is a vertex $v \in V(G)$ and the answer is the set of the edges (together with their directions) of the path incident to v. We consider different variants of this problem, examine their relations and we prove a strong connection between this problem and the theory of graph separators. Finally, we consider the case when the graph G is a grid graph, in which case using the connection with separators, we give asymptotically tight bounds (as a function of the size of the grid n, if the dimension d of the grid is considered to be fixed). In order to do this we prove a separator theorem about grid graphs which also has its own interest. This search problem is a discrete variant of a problem of Hirsch, Papadimitriou and Vavasis about finding Brouwer fixed points. In particular, in the discrete setting, our results improve their results.