In Class Problem

Suppose you have an algorithm $\mathcal{A}$ that solves the decision problem for MATCHING:

- Input: Graph $G = (V, E)$ and positive integer k
- Question: $\exists E_0 \subseteq E$ such that $|E_0| = k$ and E_0 is a matching?

Can we make a polynomial number of calls to $\mathcal{A}$ (and a polynomial amount of other operations) to

- find the size of the maximum matching in G?
- find the largest matching in G?