1. Consider a bichromatic set $S$ with $r$ red and $g$ green points in the plane in general position, i.e., no three points of $S$ are collinear. A red triangle (in $S$) is a triangle for which all three vertices are red points of $S$; see Figure 1. A green point $p$ of $S$ is said to be enclosed by a red triangle $\Delta$, if $p$ lies in the interior of $\Delta$.

![Figure 1: Examples of red triangles that enclose green points of $S$.](image.jpg)

The task is to determine all green points of $S$ for which there exists at least one enclosing red triangle in $S$. Design an efficient algorithm for solving this task. Explain your solution in detail, show its correctness, and analyze its runtime and memory requirements.

**Remark:** The algorithm only has to report the enclosed green points. It need not report any enclosing red triangles.