We describe an effective method for locally resolving the zero set of a real-analytic function $f(x, y)$. The method is geometric and involves doing a finite sequence of transformations of the form $(x, y) \rightarrow (x, y - g(x^N))$ for appropriate real-analytic functions $g$, where $N$ is an integer. After these transformations, a branch of the zero set of $f(x, y)$ will be (locally) given by $\{(x, y) : x > 0, y = 0\}$ or $\{(x, y) : x < 0, y = 0\}$. This method has applications to oscillatory integral operators, as well as to the determination of the largest $\epsilon$ for which $\int |f|^{-\epsilon}$ is finite near a given zero of a function $f(x, y)$. (Received October 04, 2004)