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A bivariate polynomial f gives a map of the complex plane A to the complex line B . Compactifying this we get a pseudomap f' of the projective plane P to the projective line L . This pseudomap f' has a finite number of indeterminacy points at infinity. These points can be resolved by a sequence of quadratic transformations. Thus we obtain a morphism ϕ from a surface S onto L . The surface S consists of the plane A together with a finite number of exceptional curves C_1, \dots, C_r which can be labelled so that ϕ maps C_i onto L for $1 \leq i \leq s$, and it maps C_i onto a single point of L for $s + 1 \leq i \leq r$. The curves C_1, \dots, C_s are called the dicritical divisors of f . Let g be another bivariate polynomial. The jacobian problem conjectures that f, g is a jacobian pair iff it is an automorphic pair. It is hoped that comparing the dicritical divisors of f and g will throw some new light on this, so far untractable, conjecture. (Received September 17, 2012)