Since the total intersection number is an integer, it is constat. $\Rightarrow$ It is invariant under continuous deformation of the D_i. ⌟

Given divisors D_i having the origin as isolated point of intersection, we may perturb them slightly to smooth divisors D_i' having a finite number of transverse intersections near the origin (Figure 1). Each of these transverse intersections has local intersection number $+1$ and $(D_1 \cdots D_n)_{\{0\}}$ is the total number of such intersections.

⌜ Since we may shrink U, and D_i's have the origin as isolated point of intersection, $f^{-1}(0) = \{0\}$ in U. $\Rightarrow$ By the argument above, $(D_1 \cdots D_n)_{\{0\}} = (D_1' \cdots D_n')_U$. By P657, it is possible to have smooth divisors around the intersection points. ⌟

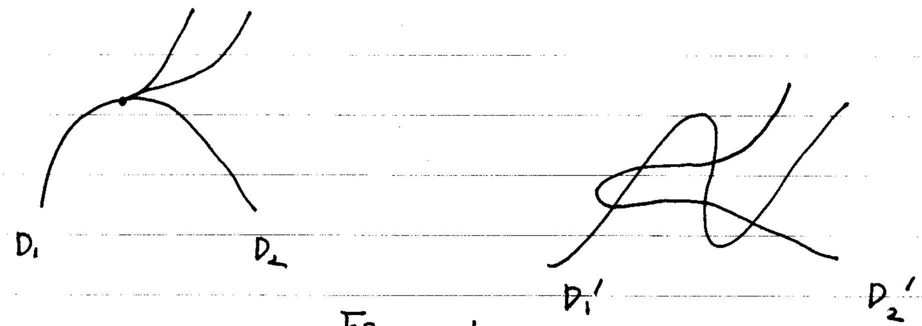

Figure 1

(d) We now assume that the D_i meet at the origin and that D_1 is nonsingular. Set $D_i' = D_1 \cap D_i$ for $i \geq 2$. Then we claim that