Lemma 9.1.3. *[2FX]Let $C = \varphi([0,1])$, let P be the region bounded by the closed polygonal curve, and E the exterior; recall that C, P, E is a partion of the plane. Choose $A, B \notin C$ and suppose that the segment AB meets C in k points, none a vertex. Then: if k is odd, A, B are in different regions, $A \in P \Leftrightarrow B \notin P$; if k is even, A, B are in the same region, $A \in P \Leftrightarrow B \in P$.*