

**Brown, M.; Kister, J. M.**

**Invariance of complementary domains of a fixed point set.** (English) Zbl 0547.57010  
*Proc. Am. Math. Soc.* 91, 503-504 (1984).

The following useful result seems not to be in the literature. It has a simple but perhaps nonobvious proof. Proposition. Let  $f$  be a homeomorphism of a connected topological manifold  $M$  with fixed point set  $F$ . Then either (1)  $f$  is invariant on each (connected) component of  $M - F$  or (2) there are exactly two components and  $f$  interchanges them.

**MSC:**

- 57N15 Topology of the Euclidean  $n$ -space,  $n$ -manifolds ( $4 \leq n \leq \infty$ ) Cited in **15** Documents  
(MSC2010)
- 57S17 Finite transformation groups
- 54H20 Topological dynamics (MSC2010)

**Keywords:**

complementary domains of the fixed point set; homeomorphism of a connected topological manifold

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