Lex G Oversteegen* (overstee@math.uab.edu), UAB mathematics, Birmingham, AL 35294, and Alexander M Blokh. Fixed points in non-invariant plane continua.
If $f:[a, b] \rightarrow \mathbb{R}$, with $a<b$, is continuous and such that $f(a) \geq a$ and $f(b) \leq b$, then $f$ has a fixed point in $I$. Suppose that $f: \mathbb{C} \rightarrow \mathbb{C}$ is map and $X$ is a continuum. We extend the above for positively oriented maps $f: X \rightarrow \mathbb{C}$ with the continuum $X$ not necessarily invariant. Then we show that in certain cases a holomorphic map $f: \mathbb{C} \rightarrow \mathbb{C}$ must have a fixed point $a$ in a continuum $X$ so that either $a \in \operatorname{Int}(X)$ or $f$ exhibits rotation at $a$. (Received September 02, 2008)

