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example of conformal mapping

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Consider the four curves $A = \{t\}$, $B = \{t + it\}$, $C = \{it\}$ and $D = \{-t + it\}$, $t \in [-10, 10]$. Suppose there is a mapping $f : \mathbb{C} \mapsto \mathbb{C}$ which maps A to D and B to C . Is f conformal at $z_0 = 0$? The size of the angles between A and B at the point of intersection $z_0 = 0$ is preserved, however the orientation is not. Therefore f is not conformal at $z_0 = 0$. Now suppose there is a function $g : \mathbb{C} \mapsto \mathbb{C}$ which maps A to C and B to D . In this case we see not only that the size of the angles is preserved, but also the orientation. Therefore g is conformal at $z_0 = 0$.