

Exercises

E21.a.9 [1PQ] Prerequisites: [1NX], [1PG]. Let γ, δ curves be closed and immersed, but seen as maps defined on \mathbb{R} and C^1 and periodic, with periods 1.

Let's see a new relation: you have $\gamma \approx_f \delta$ if there is an increasing diffeomorphism $\varphi : \mathbb{R} \rightarrow \mathbb{R}$ such that $\varphi(t + 1) = \varphi(t) + 1$ for every $t \in \mathbb{R}$ and for which $\gamma = \delta \circ \varphi$

Show that this is an equivalence relation.

Compare it with the relation \approx .