

Appendix A

Some open questions

1. In chapter- 2, we answered the question : Which subsets of \mathbb{N} can arise as the set of periods for some continuous automorphism on the 2-torus. The question is open for a general n - torus.

2. The above question can be asked for a general automorphism on the torus (may not be continuous).

We proved elsewhere:

Let G a torsion free abelian group. Then a subset A of \mathbb{N} is the set of periods for some automorphism of G if and only if $1 \in A$ and is closed under l.c.m.

3. Given $n \in \mathbb{N}$. Find the number of continuous maps on \mathbb{R} up to topological conjugacy, with exactly n non-ordinary points.

4. Find the number of bijective cubic real polynomials on \mathbb{R} upto conjugacy.

Partial answer: In between 6 and 10.

5. Which continuous maps on \mathbb{R} are conjugate to a polynomial?

(Answer is expected in terms of dynamical properties.)