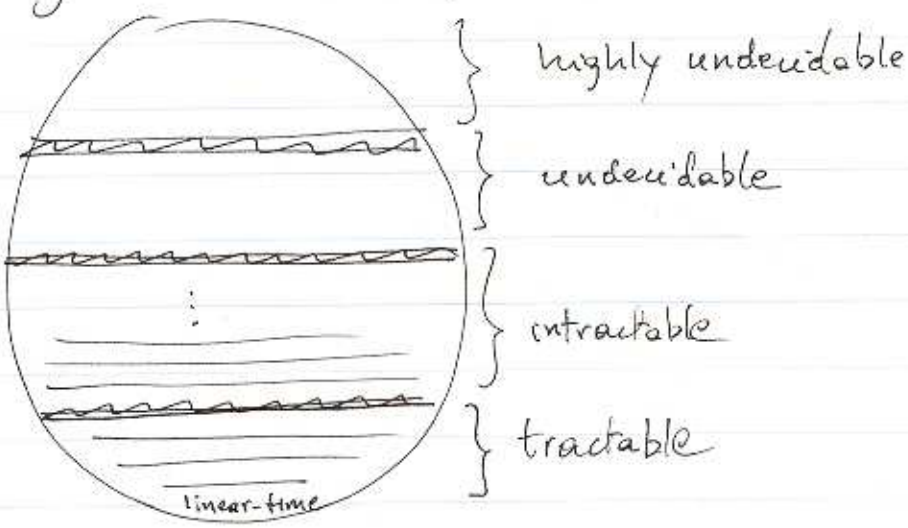
Tiling problems (consider them as decision problems) can be tractable (polynomial-time or even linear-time complexity), intractable (NP-complete or worse but still decidable), undecidable, or "highly undecidable".

An example of a "highly undecidable" tiling problem is defined next. ("Highly undecidable" here means, in technical terms from recursion theory, "inductive/coinductive" level of undecidability.)

Input:
- A finite number of tile types where i, j, k, l are positive integers.
- A distinguished tile type t, among the finitely many in T.

Output: Yes/No there is a tiling of the entire plane containing infinitely many copies of t.

Note that we want a Yes answer only if there is a tiling of the whole plane containing an infinite recurrence of t, and we want a No answer if no such tiling exists, even if other tilings of the whole plane do exist.

Tiling problems at every level