1. Prove that $y^2 = x^3 - x$ cannot be parameterized. (Follow the hints in the Discord discussion on valuations.)

2. In class, we had two version's of Nakayama's lemma:

   Theorem 1. *If A is a local ring with maximal ideal I and M is a finitely generated A-module then $IM = M$ if and only if $M = 0$.*

   Theorem 2. *If A is a local ring with maximal ideal I and M a finitely generatd A-module containing a submodule N then $N + IM = M$ if and only if $N = M$.*

   Prove that these are equivalent.