Writing Assignment 4

Due Monday, February 15, 11:59 PM

A simple closed curve is a continuous function $\gamma : [0,1] \to X$ for which $\gamma(0) = \gamma(1)$ and for which γ is otherwise an injection. (E.g., the restriction of γ to $[0,1)$ is an injection.)

For this problem, call a curve C^1 if it admits a tangent vector at every point. Two C^1 curves are transverse if, for any intersection point x, the tangent vectors of the two curves are linearly independent.

Can you draw two transverse, C^1, simple closed curves in Pacman's world with an odd number of inter section points?

Can you draw two transverse, C^1, simple closed curves on S^2 with an odd number of intersection points?

Explore.