

Assignment 22

1. Find a parametric representation for a “circular doughnut”.
2. Give concrete examples for all possible ways an immersion can fail to be an embedding.
3. Let $M_m \subset \mathbb{R}^n$ be an m -dimensional C^1 -manifold. Show that the tangent space to M_m at any point $x \in M_m$ does not depend on the choice of local representation g for the manifold.
4. Consider an ideal point on a wheel of radius R located at distance $r \leq R$ from its center. Parametrize the curve traced by this point as the wheel is rolling along a horizontal line.
5. You ask a question.

The Homework is due Friday, May 16.