## Manifolds, V2018

Problem sheet 4, to be discussed on Monday the 19th February 2018.

Problem 1. Tu, Problem 9.7.
Problem 2. Let $a, b$ be real numbers with $0<b<a$. Show that the map

$$
f: S^{1} \times S^{1} \rightarrow \mathbb{R}^{3}, \quad\left(x_{1}, x_{2}, y_{1}, y_{2}\right) \mapsto\left(\left(a+b y_{1}\right) x_{1},\left(a+b y_{1}\right) x_{2}, b y_{2}\right)
$$

is a smooth embedding.

