Homework 3.
Due November 10.

1. Find all strictly Levi pseudoconvex points of the domain

$$D = \{(z_1, z_2) \in \mathbb{C}^2 : |z_1|^2 + |z_2|^4 = 1\}$$

2. (i) Give example of a domain in $\mathbb{C}^n$ with smooth boundary with no Levi pseudoconvex boundary points.

   (ii) Prove that any bounded domain with smooth boundary contains at least one strictly Levi pseudoconvex boundary point.

3. E.2.11 (p. 66)

4. E.2.2 (p. 65)