HAND IN 1
COMPLEX ANALYSIS IN SEVERAL VARIABLES, 2020, MMA150, GU

Deadline: 21/4

1. Lebl 1.1.3 - 1.1.4.

2. Lebl 1.2.17.

3. Lebl 1.6.2.
Bonus: you might also try to show that $U \setminus f^{-1}(0)$ *is not simply connected.*

4. Lebl 1.2.5.

5. Assume that a complete Reinhardt domain $D \subseteq \mathbb{C}^2$ is given by

$$D = \{(w_1, w_2) \in \mathbb{C}^2 \mid |w_1| \leq r,\, |w_2| \leq h(|w_1|)\}$$

for some $h : [0, r] \to \mathbb{R}_+$. Characterize the logarithmic convexity of D in terms of some property of h. Use this characterization to show that a ball in $\mathbb{C}^2$ with center 0 is logarithmically convex.