

**Exercise 3.81.** [1YJ] Consider  $A = \mathbb{R}^2$  and consider the relation

$$(x, y) \leq (x', y') \iff (x \leq x' \wedge y \leq y')$$

- show that it is an order relation; is it partial or total?
- Define  $B = \{(x, y) : x^2 + y^2 \leq 1\}$ , let's consider it as an ordered set with the sorting  $\leq$  : are there maxima? minima? maximals? minimal?