

HW 2-27

- ① Given sets $A \subset B \subset \mathbb{R}$ and a function $\varphi: B \rightarrow \mathbb{R}$, its restriction on A is ψ defined by $\psi(x) = \varphi(x)$, $x \in A$. ψ is also denoted $\varphi|_A$. Suppose φ is continuous; prove that its restriction ψ is also.
- ② Suppose $F: [a, b] \rightarrow \mathbb{R}$ is continuous and all its values $F(x)$ are rational. Prove that F must be constant.