Corollary 6.21. [20K] *(Solved on 2022-11-24) Having fixed a set* $A \subseteq \mathbb{R}$ *not empty, then* $\sup A$ *is the only number* $\alpha \in \mathbb{R} \cup \{+\infty\}$ *which satisfies these two properties*

$$\forall x \in A, x \leq \alpha$$

$$\forall h < \alpha, \exists x \in A, x > h$$

as already seen in [22S] *for the more general case of totally ordered sets.*