6.3 Supremum and infimum [29M]

Let's first review the characterizations of the supremum and infimum in $\mathbb{R}$, as seen in Sec. [1YY] (or in Chap. 1 Sect. 5 in the notes [3]). Let $A \subseteq \mathbb{R}$ be a non empty set.

Definition 6.18. [08T]

Proposition 6.19. [208]

Combining the previous results, we get the result already seen in [22S]

Corollary 6.20. [20K]

Definition 6.21. [209]

Remark 6.22. [0B5]

Proposition 6.23. [20B]

Corollary 6.24. [20M]

Often the above definitions and properties are used in this form.

Definition 6.25. [20H]

6.3.1 Exercises

Let I, J be generic non-empty sets. See definitions in Sec. 6.3

Exercises

E6.26 [0B6]

E6.27 [0B7]

E6.28 [0B9]

E6.29 [0BC]

E6.30 [0BF]

E6.31 [20P]

E6.32 [20J]

E6.33 [20Y]