

Zadatak 34. Odredi infimum, supremum, minimum i maksimum (ako postoje) sljedećih podskupova u \mathbf{R} :

- 1) $S = \{x \in \mathbf{N} : 1 \leq e^x < 20\}$;
- 2) $S = \{x \in \mathbf{Q} : 1 \leq e^x < 20\}$;
- 3) $S = \{x^2 \in \mathbf{R} : -1 < x < 3\}$;
- 4) $S = \{x^2 \in \mathbf{R} : 1 < x < 3\}$.

Rješenje.

- 1) $\inf S = \min S = 1$, $\sup S = \max S = 2$.
- 2) $\inf S = \min S = 0$, $\sup S = \ln 20$, maksimum ne postoji.
- 3) $\inf S = \min S = 0$, $\sup S = 9$, maksimum ne postoji.
- 4) $\inf S = 1$, $\sup S = 9$, minimum i maksimum ne postoje.