

**Zadatak 33.** Odredi infimum, supremum, minimum i maksimum (ako postoje) sljedećih podskupova u  $\mathbf{R}$ :

- 1)  $S = \{x \in \mathbf{Z} : -6 \leq x < 3\}$ ;
- 2)  $S = \{x \in \mathbf{Q} : -6 \leq x < 3\}$ ;
- 3)  $S = \{x \in \mathbf{R} : -6 \leq x < 3\}$ ;
- 4)  $S = \{x \in \mathbf{R} : -6 \leq x^2 < 3\}$ ;
- 5)  $S = \{x \in \mathbf{R} : x = \frac{m}{n}, m, n \in \mathbf{N}, m < n\}$ .

*Rješenje.*

- 1)  $\inf S = \min S = -6$ ,  $\sup S = \max S = 2$ .
- 2)  $\inf S = \min S = -6$ ,  $\sup S = 3$ , maksimum ne postoji.
- 3)  $\inf S = \min S = -6$ ,  $\sup S = 3$ , maksimum ne postoji.
- 4)  $\inf S = -\sqrt{3}$ ,  $\sup S = \sqrt{3}$ , minimum i maksimum ne postoje.
- 5)  $\inf S = 0$ ,  $\sup S = 1$ , minimum i maksimum ne postoje.