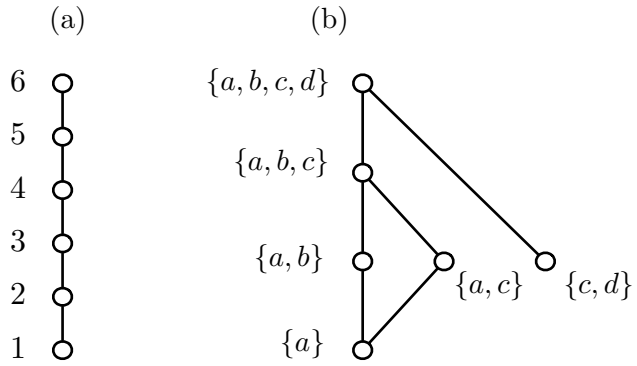
▶ **Problem 5.2-05** Draw the Hasse diagrams for each of the following partial orders.

(a) $(\{1, 2, 3, 4, 5, 6\}, \leq)$

(b) $(\{\{a\}, \{a, b\}, \{a, b, c\}, \{a, b, c, d\}, \{a, c\}, \{c, d\}\}, \subseteq)$

Solution.



▶ **Problem 5.2-06** List all minimal, minimum, maximal, and maximum elements for each of the partial orders in Exercise 5.

Solution.

(a) 1 is minimal and minimum element; 6 is maximal and maximum element.

(b) $\{a\}$ and $\{c, d\}$ are minimal elements; there is no minimum element.

The set $\{a, b, c, d\}$ is maximal and maximum element. □