

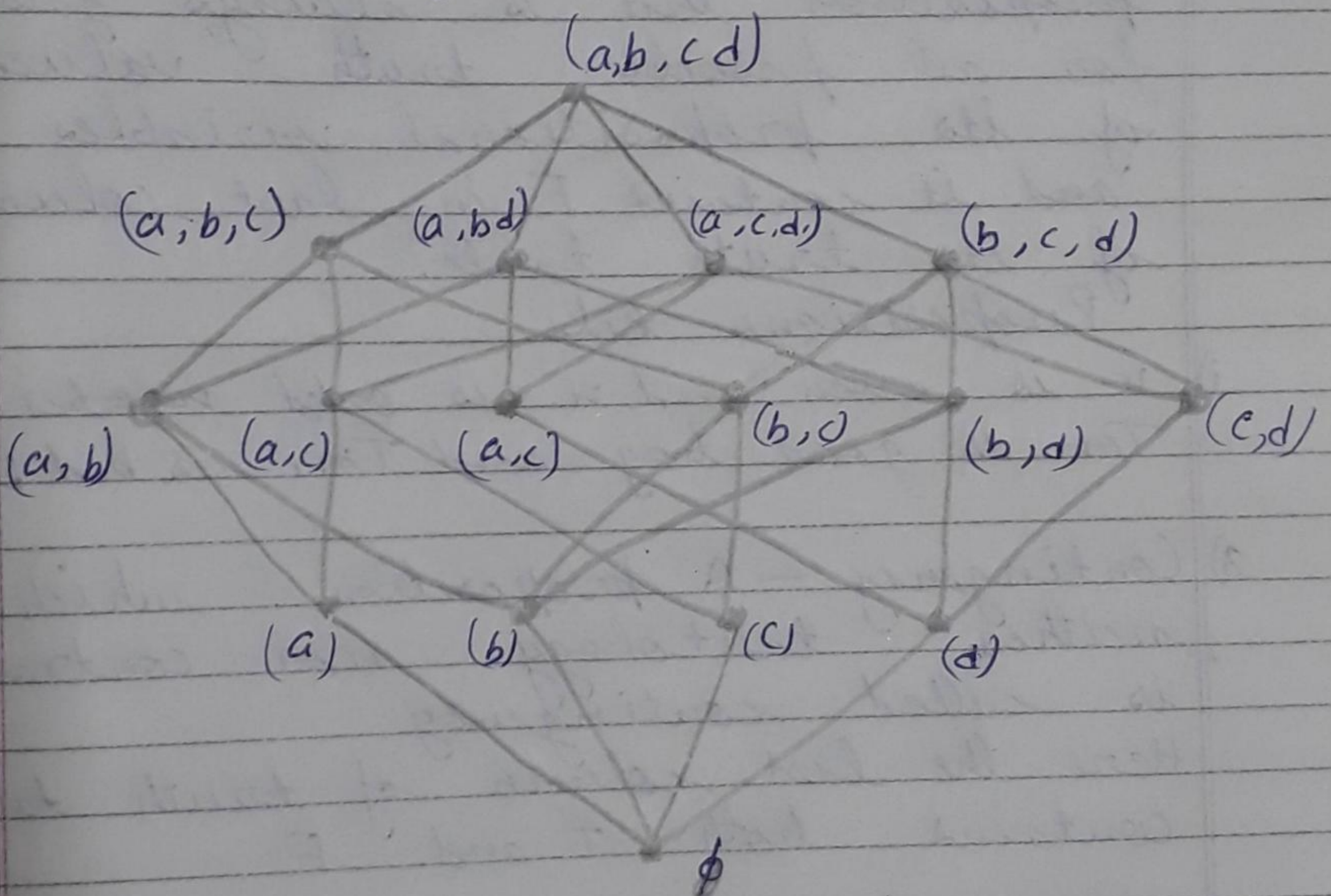
Q1 The inclusion relation  $\subseteq$  is partial ordering on the power set of a set  $S$  if it satisfies the conditions

Reflexivity  $A \subseteq A$  whenever  $A$  is a subset of  $S$

Antisymmetry = If  $A$  and  $B$  are positive integers with  $A \subseteq B$  and  $B \subseteq A$  then  $A = B$

Transitivity If  $A \subseteq B$  &  $B \subseteq C$  then  $A \subseteq C$

Hasse diagram



$P(S) \subseteq$  is not a lattice because  $(\{a, b\}, \{b, d\})$  has no lub and glb.