

Logic 3

Knowledge Base :

- 1) Alice is the mother of Bob
- 2) Bob is the father of Charlie
- 3) A father is a parent
- 4) A mother is a parent
- 5) All parents have children
- 6) If someone is a parent their children are siblings
- 7) Alice is married to David

Hypothesis :

- "Charlie is a sibling of Bob"

Entailment Process

From 1 and 2 :

Alice is the mother of Bob and Bob is the father of Charlie

From 3 and 4 :

father and mother are considered as a parent

From 5 :

All parents have children Bob is a child of Alice and Charlie is a child of Bob

From 6 & 7 :

Since Bob is a parent of the Charlie & potentially Alice due to her marriage to David

Conclusion :

The hypothesis is true

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