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1) Propositional logic :-

$P \rightarrow Q$ (if P is true. Hence Q is true (we know P is true)

Knowledge based :-

(1) Alice is mother of bob
(2) Bob is the father of charlie
(3) A father is a parent
(4) A mother is a parent
(5) All the parents have children
(6) if someone is parent, their children are not siblings.
(7) Alice is married to David.

Hypothesis :-

"charlie is a sibling of Bob"

P (2) positional logic :-

(1) M(A, B) : Alice is mother of Bob
(2) F(B, C) : Bob is father of charlie.
(3) parent(x) : x is a parent
(4) Parent(y, x) : y is a child of x
(5) Siblings(x, y) : x & y are siblings
(6) Moved(A, D) : Alice is moved to David
(7) Parent(x) has children(y) who are not a siblings (x & y)

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logical reasoning :-

(1) From statement (1) & (4)
M(A, B) & (y, x) → Alice is Parent

(2) From statement (2) & (4)
F(B, C) & (y, x) → Bob is a Parent

(3) from statement (1) & (2) & (7)

M(A, B) & F(B, C) & (∀ & (x, y)) →
→ bob & charlie are not siblings.

Prob 19/8/24