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1. Propositional Logic Statement

(Mary_mother_sue ∧ Ann_mother_sue) ∧ (Marry_father_ed ∧ Ann_father_sam) ∧ Marry_female ⇒ Marry_half_sister_ann

2. Predicate Logic Statement

$\forall, X, Y, A, Z$
(parentOf(X,Y) ∧ parentOf(X,Z)) ∧ (parentOf(A,Y) ∧ not(parentOf(A,Z))) ∧ female(Y) ∧ not(=(X,Y)) ⇒ halfSisterOf(Y, Z)