

4. (30%) Translate each of the following premises (P1, P2, P3, and P4) and the conclusion (C) into a FOL-wff using the suggested quantifier. Clearly state what the universal of discourse is and what each of the predicates stands for. Prove that the conclusion follows from the premises.

P1: The only type of movies that my son is allowed to watch are rated PG; (use \forall)

P2: No movie that I like is unsuitable for home entertainment; (use \exists)

P3: Movies with foul language are not rated PG; (use \exists)

P4: My son is allowed to watch any movie that is suitable for home entertainment; (use \forall)

C: I dislike movies with foul language;. (use \exists)