function FORWARD-CHAIN (KB, p)

    if there is a sentence in KB that is a renaming of p then return
    Add p to KB
    for each \((p_1 \land \cdots \land p_n \Rightarrow q)\) in KB such that for some \(i\), \(\text{UNIFY}(p_i, p) = \theta\) do
        FIND-AND-INFERENCE(KB, \[[p_1, \ldots, p_{i-1}, p_{i+1}, \ldots, p_n]\], q, \theta)
    end

function FIND-AND-INFERENCE(KB, premises, conclusion, \(\theta\))

    if premises=[] then
        FORWARD-CHAIN(KB, \text{SUBST}(\theta, \text{conclusion}))
    else for each \(p'\) in KB such that \(\text{UNIFY}(p', \text{SUBST}(\theta, \text{FIRST}(premises))) = \theta_2\) do
        FIND-AND-INFERENCE(KB, REST(premises), conclusion, COMPOSE(\(\theta\), \(\theta_2\))
    end

AIMA Figure 9.1 (p. 273, 1/e, 2003)