
Algorithm 1 PL-FC Entails Algorithm

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1: function PL-FC-ENTAILS(KB, q) returns true or false
2:   inputs:  $KB$ , the knowledge base, a set of propositional definite clauses  $q$ , the query, a proposition symbol
3:
4:    $count \leftarrow$  a table, where  $count[c]$  is the number of symbols in  $c$ 's premise
5:    $inferred \leftarrow$  a table, where  $inferred[s]$  is initially false for all symbols
6:    $agenda \leftarrow$  a queue of symbols, initially symbols known to be true in  $KB$ 
7:
8:   while  $agenda \neq \emptyset$  do
9:      $p \leftarrow \text{POP}(agenda)$ 
10:    if  $p = q$  then return true
11:
12:    if  $inferred[p] = \text{false}$  then
13:       $inferred[p] \leftarrow \text{true}$ 
14:      for each clause  $c$  in  $KB$  where  $p \in c.\text{PREMISE}$  do
15:        decrement  $count[c]$ 
16:        if  $count[c] = 0$  then add  $c.\text{CONCLUSIONS}$  to  $agenda$ 
17:
18:  return false
```
