```
function FOIL(examples,target) returns a set of Horn clauses
  inputs: examples, set of examples
          target, a literal for the goal predicate
  local variables: clauses, set of clauses, initially empty

  while examples contains positive examples do
    clause ← NEW-CLAUSE(examples)
    remove examples covered by clause from examples
    clauses ← {clause|clauses}
  return clauses
```

```
function NEW-CLAUSE(examples,target) returns a Horn clause
  local variables: clause, a clause with target as head and an empty body
                   l, a literal to be added to the clause
                   extended-examples, a set of examples with values for new variables

  extended-examples ← examples
  while extended-examples contains negative examples do
    l ← CHOOSE-LITERAL(NEW-LITERALS(clause),extended-examples)
    append l to the body of clause
    extended-examples ← set of examples created by applying EXTEND-EXAMPLE
      to each example in extended-examples
  return clause
```

```
function EXTEND-EXAMPLE(example,literal) returns
  if example satisfies literal
    then return the set of examples created by extending example with
      each possible constant value for each new variable in literal
  else return the empty set
```