Algorithm 1 Open Definability Algorithm

```
1: function isOpenDef(A,R,T)
2:     spectrum = calculateSpectrum(A,T)
3:     global S = ∅
4:     if spectrum = [] then
5:         return True
6:     end if
7:     for A_0 ∈ submodels(A, spectrum[0]) do
8:         if not isOpenDefR(A, spectrum[1:]) then
9:             return False
10:        end if
11:    end for
12:    return True
13: end function
14: function isOpenDefR(A, spectrum)
15:    if A ≅ S, where S ∈ S by γ then
16:        if γ preserves T then
17:            return True
18:        else
19:            return False
20:        end if
21:    end if
22:    for γ ∈ aut(A) do
23:        if γ not preserves T then
24:            return False
25:        end if
26:    end for
27:    S = S ∪ {A}
28:    if spectrum = [] then
29:        return True
30:    end if
31:    for A_0 ∈ submodels(A, spectrum[0]) do
32:        if not isOpenDefR(A_0, spectrum[1:]) then
33:            return False
34:        end if
35:    end for
36: end function
```