```
12:        if ⟨Q, O⟩.u ≤ ε then R = R ∪ ⟨Q, O⟩
13:        else
14:            if ⟨Q, O⟩.l ≤ ε then Cand = Cand ∪ ⟨Q, O⟩
15:     for each ⟨Q, O⟩ ∈ Cand do      ▷Phase 4:refinement
16:         Calculate |Q, O|_I;
17:         if |Q, O|_I ≤ ε then R = R ∪ ⟨Q, O⟩;
18:     return R.
```