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PROOF simple variant PEC
A1: (found = (∃k: 0≤k<i : a[k]=x))  // note: from invariant I
A2: 0 ≤ i ≤ N                       // note: from invariant I
A3: i ≥ N                           // note: from condition ¬g
G : (i = N) ∧ (found = (∃k : 0≤k<N : a[k]=x))
BEGIN ----------------------------------------

1. { combine A2 and A3 }
    i = N

2. { from 1 replace i with N in A1 }
    (found = (∃k: 0≤k<N : a[k]=x))

3. { combine 1 and 2 }
    (i = N) ∧ (found = (∃k: 0≤k<N : a[k]=x))
```