```
hanoi_extend_loweq  THM

⊢  ∀n:ℕ, f:({1...n}→Peg), n':ℕ.
|  n≤n'
|  ⇒
|  (∀f':({n+1...n'}→Peg), i:{1...n'}.
|   i≤n ⇒ (f {to n} ⊕ f' {to n'})(i) = f(i))  by Auto
|
1. n : ℕ
2. f : {1...n}→Peg
3. n' : ℕ
4. n≤n'
5. f' : {n+1...n'}→Peg
6. i : {1...n'}
7. i≤n
⊢  (f {to n} ⊕ f' {to n'})(i) = f(i)
  by Compute
       ⌈(f {to n} ⊕ f' {to n'})(i)⌉ *⇒ if i≤₂n→ f(i) else f'(i) fi
     THEN
     SplitOnConclITE
END
```