```
hanoi_seq_shift  THM

⊢  ∀n:ℕ, a,z,d:ℤ, s:({a...z}→{1...n}→Peg).
|  s is a Hanoi(n disk) seq on a..z
|  ⇒
|  (λx.s(x-d)) is a Hanoi(n disk) seq on a+d..z+d  by Auto
|
1. n : ℕ
2. a : ℤ
3. z : ℤ
4. d : ℤ
5. s : {a...z}→{1...n}→Peg
6. s is a Hanoi(n disk) seq on a..z
⊢  (λx.s(x-d)) is a Hanoi(n disk) seq on a+d..z+d
| by UnivCD THEN Reduce Concl
|
7. x : {a+d...z+d}
8. x' : {a+d...z+d}
9. x+1 = x'
⊢  ∃k:{1...n}. Moving disk k of n takes s(x-d) to s(x'-d)
| by BackThru: Hyp:6
|
|\
| ⊢  x-d ∈ {a...z}  by Auto
|
|\
| ⊢  x'-d ∈ {a...z}  by Auto
|
.\
. ⊢  x-d+1 = x'-d  by Auto
END
```