```
arrows_wf  THM

⊢  ∀r:ℤ, k:ℕ, L:ℕ List. r->L^k ∈ Prop  by Unfold `arrows` 0
|
.....subterm .....
1. r : ℤ
2. k : ℕ
3. L : ℕ List
4. n : ℕ
5. r≤n
6. {s:(ℕn List)| ||s|| = k & (∀x,y:ℕ||s||. x<y ⇒ s[x]<s[y]) }→ℕ||L||
7. c : ℕ||L||
8. f : ℕL[c]→ℕn
9. increasing(f;L[c])
10. s : ℕL[c] List
11. ||s|| = k
12. ∀x,y:ℕ||s||. x<y ⇒ s[x]<s[y]
⊢  map(f;s)
|  ∈ {s:(ℕn List)| ||s|| = k & (∀x,y:ℕ||s||. x<y ⇒ s[x]<s[y]) }
| by Analyze THEN (Try (Complete Auto))
|    THEN
|    (RWW
|     Thm* ∀f:(A→B), as:A List. ||map(f;as)|| = ||as|| ∈ ℤ
|     {map_length}
|     0)
|    THEN
|    (RWW
|     Thm* ∀f:(A→B), as:A List, n:ℕ||as||. map(f;as)[n] = f(as[n])
|     {map_select}
|     0)
|
1. r : ℤ
2. k : ℕ
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6. {s:(ℕn List)| ||s|| = k & (∀x,y:ℕ||s||. x<y ⇒ s[x]<s[y]) }→ℕ||L||
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8. f : ℕL[c]→ℕn
9. increasing(f;L[c])
10. s : ℕL[c] List
11. ||s|| = k
12. ∀x,y:ℕ||s||. x<y ⇒ s[x]<s[y]
13. x : ℕ||s||
14. y : ℕ||s||
15. x<y
⊢  f(s[x])<f(s[y])
  by (FwdThru
     Thm* ∀k:ℕ, f:(ℕk→ℤ).
          increasing(f;k) ⇒ (∀x,y:ℕk. x<y ⇒ f(x)<f(y))
     {increasing_implies}
     [9])
    THEN
    (BackThru -1)
    THEN
```

```
    EasyHyp
END
```