```
union_cardinality1  THM

⊢  ∀k1,k2:ℕ. ∃f:((ℕk1+ℕk2)→ℕ(k1+k2)). Inj(ℕk1+ℕk2; ℕ(k1+k2); f)
| by Auto THEN (InstConcl [λx.InjCase(x; i. i, k1+i)])
|    THEN
|    (Unfold `inject` 0)
|    THEN
|    (Reduce 0)
|
1. k1 : ℕ
2. k2 : ℕ
3. a1 : ℕk1+ℕk2
4. a2 : ℕk1+ℕk2
5. InjCase(a1; i. i, k1+i) = InjCase(a2; i. i, k1+i)
⊢  a1 = a2
  by (Analyze 4) THEN (Analyze 3) THEN (Reduce -1) THEN Analyze
END
```