```
trivial_rel_subst  THM

⊢  ∀r:rel(), as:(Label×Term) List.
|  (∀x:Label. unprime(apply_alist(as;x;x)) = x) ⇒
|  rel_unprime(rel_subst(as;r)) = rel_unprime(r)
| by Unfolds ``rel_unprime rel_subst`` 0
THEN Auto

|    THEN D 1 THEN All Reduce
THEN EqCD THEN Auto

|    THEN BackThruLemma `list_extensionality`

|    THEN Try (Complete Auto)
THENM RWW "map_length_nat" 0

|    THEN Auto'
|
|
1. relname()
2. r1 : Term List
3. as : (Label×Term) List
4. ∀x:Label. unprime(apply_alist(as;x;x)) = x
5. i : ℕ
6. i<||r1||
⊢  map(λt.unprime(t);map(λt.term_subst(as;t);r1))[i]
   =
   map(λt.unprime(t);r1)[i]
  by RWW "map_select" 0
THENM Reduce 0
THEN Auto'

     THEN Try (Unfold `label` 0 THEN Reduce 0 THEN EqCD THENA Auto

               THEN RWW "map_select" 0 THEN Auto' THEN Reduce 0

               THEN Auto)

     ...
END
```