```
flip_twice  THM

⊢  ∀k:ℤ, x,y,i:ℕk. (y, x)((y, x)(i)) = i
| by Auto THEN Subst ((y, x)((y, x)(i))) ~ (((y, x) o (y, x))(i)) 0
|
|\
| .....equality .....
| 1. k : ℤ
| 2. x : ℕk
| 3. y : ℕk
| 4. i : ℕk
| ⊢  ((y, x)((y, x)(i))) ~ (((y, x) o (y, x))(i))
|   by Reduce 0 THEN Auto
|
.\
. 1. k : ℤ
. 2. x : ℕk
. 3. y : ℕk
. 4. i : ℕk
. ⊢  ((y, x) o (y, x))(i) = i
.   by RWO "flip_inverse" 0 THEN Reduce 0 THEN Auto
END
```