```
eval_factorization_not_one  THM

⊢  ∀a:{2...}, b:ℤ, f:({a..b⁻}→ℕ).
|   ¬Π↑{a..b⁻}(f) = 1 ⟺ (∃i:{a..b⁻}. ¬f(i) = 0)
| by Rewrite by
|    Thm*  ∀a:{2...}, b:ℤ, f:({a..b⁻}→ℕ).
|          Π↑{a..b⁻}(f) = 1 ⟺ (∀i:{a..b⁻}. f(i) = 0)
|    {eval_factorization_one} ...ℕ
|
|\
| 1. a : {2...}
| 2. b : ℤ
| 3. f : {a..b⁻}→ℕ
| 4. ¬(∀i:{a..b⁻}. f(i) = 0)
| ⊢  ∃i:{a..b⁻}. ¬f(i) = 0  by Decide: ∃i:{a..b⁻}. ¬f(i) = 0 ∈ ℤ ...ℕ
| |
| 5. ¬(∃i:{a..b⁻}. ¬f(i) = 0)
| ⊢  ∃i:{a..b⁻}. ¬f(i) = 0  by Analyze4 ...ℕ
| |
| 4. ¬(∃i:{a..b⁻}. ¬f(i) = 0)
| 5. i : {a..b⁻}
| ⊢  f(i) = 0
| | by FwdThru:
| |    Thm*  ∀Q:(T→Prop). ¬(∃x:T. Q(x)) ⟺ (∀x:T. ¬Q(x))
| |    {not_over_exists}
| |    on [ Hyp:4 ]
| |    Using:[i] ...wℕ
| |
| 6. ¬¬f(i) = 0
| ⊢  f(i) = 0  by Autoℕ
|
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. 1. a : {2...}
. 2. b : ℤ
. 3. f : {a..b⁻}→ℕ
. 4. ∃i:{a..b⁻}. ¬f(i) = 0
. ⊢  ¬(∀i:{a..b⁻}. f(i) = 0)  by Analyze-1
. |
. 4. i : {a..b⁻}
. 5. ¬f(i) = 0
. ⊢  ¬(∀i:{a..b⁻}. f(i) = 0)  by SimilarTo Hyp:-1 ...wℕ
. |
. 5. ∀i:{a..b⁻}. f(i) = 0
. ⊢  f(i) = 0  by BackThru: Hyp:-1 ...wℕ
END
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