```
hzero_def  THM

⊢  equal(0,abs_num(zero_rep))  by HN THEN StrongAuto
|
⊢  0 = abs_num(zero_rep)
| by Inst
|    Thm* ∀'a,'b:S, P:('b→ℙ), rep:('a→'b), abs:('b→'a), a:'a, r:'b.
|         iso_pair('a;'b;P;rep;abs) ⇒ rep(a) = r ⇒ a = abs(r)
|    {iso_pair_rep_to_abs}
|    [ℕ;ℕ;is_num_rep;rep_num;abs_num]
|    THEN
|    StrongAuto
|    THEN
|    BackThru 1
|    THEN
|    StrongAuto
|
|\
| 1. ∀a,r:ℕ.
|    iso_pair(ℕ;ℕ;is_num_rep;rep_num;abs_num)
|    ⇒
|    rep_num(a) = r ⇒ a = abs_num(r)
| ⊢  iso_pair(ℕ;ℕ;is_num_rep;rep_num;abs_num)
|   by L Thm* iso_pair(ℕ;ℕ;is_num_rep;rep_num;abs_num)    {num_iso}
|      THEN
|      StrongAuto
|
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. 1. ∀a,r:ℕ.
.    iso_pair(ℕ;ℕ;is_num_rep;rep_num;abs_num)
.    ⇒
.    rep_num(a) = r ⇒ a = abs_num(r)
. ⊢  rep_num(0) = zero_rep
.   by Unab [‘hrep_num‘] THEN Simp THEN StrongAuto
END
```