```
rem_self  THM

⊢  ∀n:ℤ⁻⁰. (n rem n) = 0
| by Auto
|    THEN
|    (Inst
|     Thm* ∀a:ℤ, n:ℤ⁻⁰, q,r:ℤ.
|          a = q·n+r
|          ⇒
|          |r|<|n|
|          ⇒
|          (r<0 ⇒ a<0) ⇒ (r>0 ⇒ a>0) ⇒ q = (a ÷ n) & r = (a rem n)
|     {div_rem_unique}
|     [n;n;1;0])
|
.....antecedent .....
1. n : ℤ⁻⁰
⊢  |0|<|n|
  by (Unfold `absval` 0) THEN (Reduce 0) THEN SplitOnConclITE
END
```