```
mod_mod  THM

⊢  ∀x:ℤ, n:ℕ+. ((x mod n) mod n) = (x mod n)
  by Auto
     THEN
     (Inst
      Thm* ∀a:ℤ, n:ℕ+. a = (a ÷↓ n)·n+(a mod n) & (a mod n)<n
      {div_floor_mod_properties}
      [x;n])
     THEN
     (Inst
      Thm* ∀a:ℤ, n:ℕ+, q:ℤ, r:ℕ.
           a = q·n+r ⇒ r<n ⇒ q = (a ÷↓ n) & r = (a mod n)
      {div_floor_mod_unique}
      [x mod n;n;0;x mod n])
END
```