```
rem_3_to_1  THM

⊢  ∀a:{...0}, n:{...-1}. (a rem n) = -((-a) rem -n)  by UnivCD
|
1. a : {...0}
2. n : {...-1}
⊢  (a rem n) = -((-a) rem -n)
| by RWH
|     (LemmaC
|      Thm* ∀a:ℤ, n:ℤ⁻⁰. (a rem n) = a-(a ÷ n)·n    {rem_to_div})
|     0
|
⊢  a-(a ÷ n)·n = -(-a-((-a) ÷ (-n))·(-n))
| by Rewrite
|     (NthC 1
|      (LemmaC
|       Thm* ∀a:{...0}, b:{...-1}. (a ÷ b) = ((-a) ÷ (-b))
|       {div_3_to_1}))
|     0
|
⊢  a-((-a) ÷ (-n))·n = -(-a-((-a) ÷ (-n))·(-n))  by Arith
END
```