```
even_odd_exists  THM

⊢  ∀n:ℕ. (even(n) ⇒ (∃m:ℕ. n = 2·m)) & (odd(n) ⇒ (∃m:ℕ. n = 2·m+1))
  by RewriteOfThm
     Thm* all
          (λn:hnum. and
                    (implies
                     (even(n)
                     ,exists(λm:hnum. equal(n,mult(2,m))))
                    ,implies
                     (odd(n)
                     ,exists(λm:hnum. equal(n,suc(mult(2,m)))))))
     {heven_odd_exists}
     (SimpsetC [‘hol_to_nuprl‘;‘bequal‘])
END
```