

Inference at \* 1 2  
of proof for Lemma fib\_wf:

...falsecase.... NILNIL

1.  $n : \mathbb{N}$
  2.  $\forall n_1 : \mathbb{N}. (n_1 < n) \Rightarrow (\text{fib}(n_1) \in \mathbb{N})$
  3.  $(\neg(n = 0)) \ \&\ \ (\neg(n = 1))$
- $\vdash \text{fib}(n - 1) + \text{fib}(n - 2) \in \mathbb{N}$   
by ((BLemma 'add\_nat\_wf')  
CollapseTHEN (((BHyp 2) THEN (Auto\_aux (first\_nat 1:n  
 ) ((first\_nat 2:n),(first\_nat 3:n)) (first\_tok :t) inil\_term))))).