

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

....subterm.... T:t1:n

1.  $f$  :  
 $\forall n, a, b:\mathbb{N}.$   
 $\{m:\mathbb{N} \mid$   
 $\forall k:\mathbb{N}.$   
 $(a = \text{fib}(k))$   
 $\Rightarrow ((k \leq 0) \Rightarrow (b = 0))$   
 $\Rightarrow ((0 < k) \Rightarrow (b = \text{fib}(k - 1)))$   
 $\Rightarrow (m = \text{fib}(n+k))\}$

2.  $n : \mathbb{N}$   
 $\vdash f(n,1,0) \in \{m:\mathbb{N} \mid m = \text{fib}(n)\}$   
by (Auto·)  
CollapseTHEN (Auto'·)

1: ....set predicate.... NILNIL

$\vdash f(n,1,0) = \text{fib}(n)$