

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

....wf.... NILNIL

1. $n : \mathbb{Z}$
 2. $0 < n$
 3. $\forall a, b: \mathbb{N}.$
 $\{m: \mathbb{N} \mid$
 $\forall k: \mathbb{N}.$
 $(a = \text{fib}(k))$
 $\Rightarrow ((k \leq 0) \Rightarrow (b = 0))$
 $\Rightarrow ((0 < k) \Rightarrow (b = \text{fib}(k - 1)))$
 $\Rightarrow (m = \text{fib}((n - 1) + k))\}$
 4. $a : \mathbb{N}$
 5. $b : \mathbb{N}$
 6. $\forall b_1: \mathbb{N}.$
 $\{m: \mathbb{N} \mid$
 $\forall k: \mathbb{N}.$
 $(a + b = \text{fib}(k))$
 $\Rightarrow ((k \leq 0) \Rightarrow (b_1 = 0))$
 $\Rightarrow ((0 < k) \Rightarrow (b_1 = \text{fib}(k - 1)))$
 $\Rightarrow (m = \text{fib}((n - 1) + k))\}$
- $\vdash a \in \mathbb{N}$
by Auto.