

Inference at *
of proof for Lemma primrec_add:

$\vdash \forall T:\text{Type}, n, m:\mathbb{N}, b:T, c:(\{0..(n+m)^-\} \rightarrow T \rightarrow T).$
 $\text{primrec}(n+m;b;c) = \text{primrec}(n;\text{primrec}(m;b;c);\lambda i,t. c(i+m,t))$
by (((RepeatFor 2 ((D 0)
CollapseTHEN ((Auto_aux (first_nat 1:n) ((first_nat 1:n
), (first_nat 3:n)) (first_tok :t) inil_term))))·
CollapseTHEN (NatInd (-1))))·
CollapseTHEN ((Auto_aux (first_nat 1:n) ((first_nat 1:n), (first_nat 3:n)) (first_tok :t
) inil_term))))·

1:

1. $T : \text{Type}$
 2. $m : \mathbb{N}$
 3. $b : T$
 4. $c : \{0..(0+m)^-\} \rightarrow T \rightarrow T$
- $\vdash \text{primrec}(0+m;b;c) = \text{primrec}(0;\text{primrec}(m;b;c);\lambda i,t. c(i+m,t))$

2:

1. $T : \text{Type}$
 2. $n : \mathbb{Z}$
 3. $0 < n$
 4. $\forall m:\mathbb{N}, b:T, c:(\{0..((n-1)+m)^-\} \rightarrow T \rightarrow T).$
 $\text{primrec}((n-1)+m;b;c) = \text{primrec}(n-1;\text{primrec}(m;b;c);\lambda i,t. c(i+m,t))$
 5. $m : \mathbb{N}$
 6. $b : T$
 7. $c : \{0..(n+m)^-\} \rightarrow T \rightarrow T$
- $\vdash \text{primrec}(n+m;b;c) = \text{primrec}(n;\text{primrec}(m;b;c);\lambda i,t. c(i+m,t))$