

Inference at * 1 1
of proof for Lemma fun_exp_add-sq:

1. $n : \mathbb{Z}$
2. $0 < n$
3. $\forall m:\mathbb{N}, f, x:\text{Top}.$
 $(\text{primrec}((n - 1)+m;\lambda x.x;\lambda i,g. f \circ g)(x))$
 \sim
 $(\text{primrec}(n - 1;\lambda x.x;\lambda i,g. f \circ g)(\text{primrec}(m;\lambda x.x;\lambda i,g. f \circ g)(x)))$
4. $m : \mathbb{N}$
5. $f : \text{Top}$
6. $x : \text{Top}$
7. $\neg(n = 0)$
8. $\neg(n+m = 0)$

$\vdash (\text{primrec}((n+m) - 1;\lambda x.x;\lambda i,g. f \circ g)(x))$
 \sim
 $(\text{primrec}(n - 1;\lambda x.x;\lambda i,g. f \circ g)(\text{primrec}(m;\lambda x.x;\lambda i,g. f \circ g)(x)))$
by (((RW (SweepDnC (RevHypC 3)) 0)
CollapseTHEN (Auto·))·)
CollapseTHEN (((
(if (((first_nat 2:n)) = 0) then (Repeat (((EqCD)
CollapseTHEN ((Try (Trivial))·))·
)) else (RepeatFor (first_nat 2:n) (((EqCD)
CollapseTHEN ((Try (Trivial))·))·))))·)
CollapseTHEN (Auto'·))·).