

Inference at * 1
of proof for Lemma p-fun-exp-add1-sq:

1. $A : \text{Type}$
 2. $f : A \rightarrow (A + \text{Top})$
 3. $x : A$
 4. $n : \mathbb{N}$
 5. $\uparrow \text{isl}(f(x))$
- $\vdash (f^{n+1}(x) \sim (f^n(\text{outl}(f(x))))$
by (Unfold 'p-fun-exp' (0)·)
CollapseTHEN (((RWO "simple-primrec-add" 0)

CollapseTHENA (Auto·)·
CollapseTHEN ((Reduce 0)
CollapseTHEN ((NatInd (-2))

CollapseTHEN (Reduce 0)·)·)·

1:

4. $\uparrow \text{isl}(f(x))$
 - $\vdash (f \circ \text{p-id}() (x) \sim (\text{p-id}()(\text{outl}(f(x))))$
- 2:upcase. NILNIL

4. $\uparrow \text{isl}(f(x))$
 5. $n : \mathbb{Z}$
 6. $0 < n$
 7. $(\text{primrec}(n - 1; f \circ \text{p-id}() ; \lambda i, g. f \circ g)(x))$
 \sim
 $(\text{primrec}(n - 1; \text{p-id}(); \lambda i, g. f \circ g)(\text{outl}(f(x))))$
- $\vdash (\text{primrec}(n; f \circ \text{p-id}() ; \lambda i, g. f \circ g)(x))$
 \sim
 $(\text{primrec}(n; \text{p-id}(); \lambda i, g. f \circ g)(\text{outl}(f(x))))$