Inference at $*$ 2 2 1 1
of proof for Lemma p-fun-exp-add-sq:

. . . . .equality. . . . . NILNIL

1. A : Type
2. f : $A \rightarrow (A$ + Top)
3. x : A
4. m : $\mathbb{Z}$
5. $0 < m$
6. $\forall n$:$\mathbb{N}$. ($\uparrow$can-apply(f^m - 1;x)) $\Rightarrow$ ((f^n+(m - 1)(x)) ~ (f^n(do-apply(f^m - 1;x))))
7. n : $\mathbb{N}$
8. $\uparrow$can-apply(f^m;x)
9. $\neg(n = 0)$
10. $\neg(n+m = 0)$
11. $\neg(n = 0)$
12. $\neg(m = 0)$

$\vdash$(f o f^(n+m) - 1 (x)) ~ (f o f^n (do-apply(f^m - 1;x)))
by ((Unfold ‘p-compose‘ (0)·)
CollapseTHEN (RepUR “can-apply do-apply“ (0)·)·)

CollapseTHEN ((Subst’ ((n+m) - 1) ~ (n+(m - 1)) (0)·)
CollapseTHEN (((Try (
(Complete (Auto·))·))·)
CollapseTHEN ((Subst’ (f^n+(m - 1)(x))
~
(f^n(do-apply(f^m - 1;x))) (0)·)

CollapseTHEN (((Try ((Fold ‘do-apply‘ 0)
CollapseTHEN (Trivial)·))·)
CollapseTHEN (
(if ((0) = 0) then BackThruSomeHyp else BHyp (0))·)·)·)·)·)·

1:

$\vdash$ $\uparrow$can-apply(f^m - 1;x)
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