

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

1.  $A : \text{Type}$
  2.  $f : A \rightarrow (A + \text{Top})$
  3.  $x : A$
  4.  $m : \mathbb{Z}$
  5.  $0 < m$
  6.  $\forall n:\mathbb{N}. (\uparrow \text{can-apply}(f^{\wedge} m - 1; x)) \Rightarrow ((f^{\wedge} n + (m - 1)(x)) \sim (f^{\wedge} n(\text{do-apply}(f^{\wedge} m - 1; x))))$
  7.  $n : \mathbb{N}$
  8.  $\uparrow \text{can-apply}(f^{\wedge} m; x)$
  9.  $n = 0$
- $\vdash (f^{\wedge} 0 + m(x)) \sim (f^{\wedge} 0(\text{do-apply}(f^{\wedge} m; x)))$   
by (Subst' (0+m) ~ m ( 0)·)  
CollapseTHEN ((Try ((Complete (Auto·))·))·).

1:

$$\vdash (f^{\wedge} m(x)) \sim (f^{\wedge} 0(\text{do-apply}(f^{\wedge} m; x)))$$

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