

Inference at \* 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.  $n : \mathbb{N}$
5.  $\uparrow \text{can-apply}(f^{\wedge} 0; x)$

$\vdash (f^{\wedge} n + 0(x)) \sim (f^{\wedge} n(\text{do-apply}(f^{\wedge} 0; x)))$   
by (((RepUR “p-fun-exp do-apply“ ( 0)·)  
CollapseTHEN (Fold ‘p-fun-exp‘ 0)·)  
  
CollapseTHEN (RepUR “p-id“ ( 0)··)  
CollapseTHEN (((UnivCD)  
CollapseTHENA (Auto·)  
·)  
CollapseTHEN ((ProveSqEq)  
CollapseTHEN (Auto·)·)·)