

Inference at * 2
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. $\uparrow \text{can-apply}(f^{\wedge} m; x)$
- $\vdash (f^{\wedge} n + m(x)) \sim (f^{\wedge} n(\text{do-apply}(f^{\wedge} m; x)))$
by CaseNat 0 'n'

1:

9. $n = 0$
- $\vdash (f^{\wedge} 0 + m(x)) \sim (f^{\wedge} 0(\text{do-apply}(f^{\wedge} m; x)))$

2:

9. $\neg(n = 0)$
- $\vdash (f^{\wedge} n + m(x)) \sim (f^{\wedge} n(\text{do-apply}(f^{\wedge} m; x)))$
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