Inference at $*$ 1 1 1
of proof for Lemma complete_nat_ind_with_y:

. . . . .assertion. . . . . NILNIL

1. $P : \mathbb{N} \to \mathbb{P}\{\mathrm{k}\}$
2. $g : \forall i{:}\mathbb{N}.\ (\forall j{:}\mathbb{N} i.\ P(j)) \Rightarrow P(i)$
$\vdash \mathrm{Y}(\lambda f,x.\ g(x,f)) \in$!Void()$\to$!Void()
by ((Rewrite (HigherC YUnrollC) 0)
CollapseTHEN (Reduce 0))$\cdot$

1:

$\vdash (\lambda x.g(x,\mathrm{Y}(\lambda f,x.\ g(x,f)))) \in$!Void()$\to$!Void()
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http://www.nuprl.org/FDLcontent/p0_359040_/p121_93198_{complete_nat_ind_with_y}1_1_1.html