

Inference at * 1 1
of proof for Lemma bool_sq:

1. $x : ?\text{Unit}$
2. $y : ?\text{Unit}$
3. $x = y$
4. $\text{case } x \text{ of } \text{inl}(x) \Rightarrow x \mid \text{inr}(x) \Rightarrow x = \text{case } y \text{ of } \text{inl}(x) \Rightarrow x \mid \text{inr}(x) \Rightarrow x$
5. $\text{case } x \text{ of } \text{inl}(x) \Rightarrow \text{True} \mid \text{inr}(x) \Rightarrow \text{False} = \text{case } y \text{ of } \text{inl}(x) \Rightarrow \text{True} \mid \text{inr}(x) \Rightarrow \text{False}$
- $\vdash x \sim y$
by Assert $\neg(\text{True} = \text{False})$

1:assertion..... NILNIL

$\vdash \neg(\text{True} = \text{False})$
2:

6. $\neg(\text{True} = \text{False})$
- $\vdash x \sim y$