

Inference at * 2 1 1 1
of proof for Lemma before-adjacent:

1. $T : \text{Type}$
 2. $T \text{ List}$
 3. $u : T$
 4. $v : T \text{ List}$
 5. $\forall x, y:T.$
 $\text{no_repeats}(T;v)$
 $\Rightarrow \text{adjacent}(T;v;x;y)$
 $\Rightarrow (\forall z:T. z \text{ before } y \in v \Rightarrow (z \text{ before } x \in v \vee (z = x)))$
 6. $x : T$
 7. $y : T$
 8. $\text{no_repeats}(T;[u / v])$
 9. $0 < \|v\|$
 10. $x = u$
 11. $y = \text{hd}(v)$
 12. $z : T$
 13. $z = u$
 14. $(y \in v)$
- $\vdash ((z = u \ \& \ (x \in v)) \vee z \text{ before } x \in v \vee (z = x))$
by ((OrRight)
CollapseTHEN (Auto·)).

.