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

1. $i : \mathbb{Z}$
2. $j : \mathbb{Z}$
3. $x : \{i..j^-\}$
4. $y : \{i..j^-\}$

$\vdash (x = y) \vee (\neg(x = y))$
 by ((Decide $x = y$)
 CollapseTHENA ((Auto_aux (first_nat 1:n) ((first_nat 1:n
 ),(first_nat 3:n)) (first_tok :t) inil_term)))·

1:

5. $x = y$

$\vdash (x = y) \vee (\neg(x = y))$

2:

5. $\neg(x = y)$

$\vdash (x = y) \vee (\neg(x = y))$

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