Inference at $*$ 1 0 1 3 1
 of proof for Lemma integer sqrt:

1. $n : \mathbb{Z}$
2. $0 < n$
3. $((n - 1) \geq 0) \Rightarrow (\exists r{:}\mathbb{N}.\ (((r * r) \leq (n - 1)) \ \&\ ((n - 1) < ((r{+}1) * (r{+}1)))))$
4. $n \geq 0$

$\vdash \exists r{:}\mathbb{N}.\ (((r * r) \leq n) \ \&\ (n < ((r{+}1) * (r{+}1))))$
 by ((Thin (-1))
 CollapseTHEN (D (-1)))·

1: .....antecedent..... NILNIL

2. $0 < n$

$\vdash (n - 1) \geq 0$

2:

3. $\exists r{:}\mathbb{N}.\ (((r * r) \leq (n - 1)) \ \&\ ((n - 1) < ((r{+}1) * (r{+}1))))$

$\vdash \exists r{:}\mathbb{N}.\ (((r * r) \leq n) \ \&\ (n < ((r{+}1) * (r{+}1))))$

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