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

1. $x : \mathbb{Z}$
2. $y : \mathbb{Z}$
$\vdash$(if 0 $\leq$z x then x else -x fi = if 0 $\leq$z y then y else -y fi) $\Longleftrightarrow$ $x = \pm\, y$
 by InteriorProof ((((((BoolCasesOnCExp 0 $\leq$z x)
 CollapseTHENM (BoolCasesOnCExp 0 $\leq$z y))
 ·)
 CollapseTHENM (AbReduce 0))·)
 CollapseTHENA (
 (Auto_aux (first_nat 1:n) ((first_nat 1:n),(first_nat 3:n)) (first_tok
 :t) inil_term)))·

 1:

 3. $0 \leq x$
 4. $0 \leq y$
 $\vdash$ $(x = y) \Longleftrightarrow x = \pm\, y$
 2:

 3. $0 \leq x$
 4. $y < 0$
 $\vdash$ $(x = (\text{-}y)) \Longleftrightarrow x = \pm\, y$
 3:

 3. $x < 0$
 4. $0 \leq y$
 $\vdash$ $((\text{-}x) = y) \Longleftrightarrow x = \pm\, y$
 4:

 3. $x < 0$
 4. $y < 0$
 $\vdash$ $((\text{-}x) = (\text{-}y)) \Longleftrightarrow x = \pm\, y$
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