Inference at $*$ 1 0
 of proof for Lemma absval_ubound:

1. $i : \mathbb{Z}$
2. $n : \mathbb{N}$
$\vdash$ $(|i| \leq n) \iff (((\text{-}n) \leq i)$ & $(i \leq n))$
  by PERMUTE{1:n,
  2:n,
  3:n,
  4:n,
  5:n,
  6:n,
  7:n,
  8:n,
  9:n,
  10:n,
  11:n,
  12:n,
  10:n,
  13:n,
  11:n,
  14:n,
  15:n,
  16:n,
  17:n,
  18:n,
  16:n,
  15:n,
  19:n}

  1: . . . . .wf. . . . . NILNIL

    $\vdash$ $0 \leq \text{z}\ i \in \mathbb{B}$
  2: . . . . .wf. . . . . NILNIL

    $\vdash$ $\mathbb{B} \in$ Type
  3: . . . . .wf. . . . . NILNIL

    3. $0 \leq \text{z}\ i = \text{tt}$
    $\vdash$ $(0 \leq \text{z}\ i = \text{tt}) \in \mathbb{P}_1$
  4: . . . . .wf. . . . . NILNIL

    3. $0 \leq \text{z}\ i = \text{tt}$
    $\vdash$ $(\uparrow 0 \leq \text{z}\ i) \in \mathbb{P}_1$

5: . . . . .wf. . . . . NILNIL

3. $0 \leq_z i = \mathrm{tt}$
$\vdash (0 \leq i) \in \mathbb{P}_1$
6: . . . . .wf. . . . . NILNIL

3. $0 \leq_z i = \mathrm{tt}$
$\vdash 0 \leq_z i \in \mathbb{B}$
7: . . . . .wf. . . . . NILNIL

3. $0 \leq_z i = \mathrm{tt}$
$\vdash 0 \in \mathbb{Z}$
8: . . . . .wf. . . . . NILNIL

3. $0 \leq_z i = \mathrm{tt}$
$\vdash i \in \mathbb{Z}$
9: . . . . .truecase. . . . . NILNIL

3. $0 \leq i$
$\vdash (i \leq n) \iff (((\text{-}n) \leq i)\ \&\ (i \leq n))$
10: . . . . .wf. . . . . NILNIL

3. $0 \leq_z i = \mathrm{ff}$
$\vdash (0 \leq_z i = \mathrm{ff}) \in \mathbb{P}_1$
11: . . . . .wf. . . . . NILNIL

3. $0 \leq_z i = \mathrm{ff}$
$\vdash (\uparrow i <_z 0) \in \mathbb{P}_1$
12: . . . . .wf. . . . . NILNIL

3. $0 \leq_z i = \mathrm{ff}$
$\vdash (i < 0) \in \mathbb{P}_1$
13: . . . . .wf. . . . . NILNIL

3. $0 \leq_z i = \mathrm{ff}$
$\vdash (\uparrow(\neg_b 0 \leq_z i)) \in \mathbb{P}_1$
14: . . . . .wf. . . . . NILNIL

3. $0 \leq_z i = \mathrm{ff}$
$\vdash 0 \leq_z i \in \mathbb{B}$
15: . . . . .wf. . . . . NILNIL

3. $0 \leq_z i = \mathrm{ff}$
$\vdash 0 \in \mathbb{Z}$
16: . . . . .wf. . . . . NILNIL

3. $0 \leq \text{z}\ i = \text{ff}$
$\vdash i \in \mathbb{Z}$
17: . . . . .antecedent. . . . . NILNIL

3. $0 \leq \text{z}\ i = \text{ff}$
$\vdash$ True
18: . . . . .wf. . . . . NILNIL

3. $0 \leq \text{z}\ i = \text{ff}$
4. $(\uparrow(\neg_b 0 \leq \text{z}\ i)) = (\uparrow i <\text{z}\ 0)$
$\vdash \mathbb{P}_1 = \mathbb{P}_1$
19: . . . . .falsecase. . . . . NILNIL

3. $i < 0$
$\vdash ((\text{-}i) \leq n) \iff (((\text{-}n) \leq i)\ \&\ (i \leq n))$
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http://www.nuprl.org/FDLcontent/p0_942988_/p121_73542_{absval_ubound}1_0.html