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

1. $i : \mathbb{Z}$
2. $n : \mathbb{N}$
$\vdash (|i| > n) \iff ((i < (\text{-}n)) \vee (i > n))$
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

$\vdash \mathbb{B} \in \text{Type}$
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. $0 \leq_{\mathrm{z}} i = \mathrm{tt}$
$\vdash (0 \leq i) \in \mathbb{P}_1$
6: . . . . .wf. . . . . NILNIL

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

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

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

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

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

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

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

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

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

3. $0 \leq_{\mathrm{z}} i = \mathrm{ff}$
$\vdash 0 \in \mathbb{Z}$
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. $i < 0$
$\vdash ((\text{-}i) > n) \iff ((i < (\text{-}n)) \vee (i > n))$
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http://www.nuprl.org/FDLcontent/p0_942988_/p121_73204_{absval_lbound}1_0.html