```
divides_of_absvals  THM

⊢  ∀a,b:ℤ. |a| | |b| ⟺ a | b  by UnivCD
|
1. a : ℤ
2. b : ℤ
⊢  |a| | |b| ⟺ a | b  by Unfold ‘absval‘ 0
|
⊢  if 0≤₂a→ a else -a fi | if 0≤₂b→ b else -b fi ⟺ a | b
| by (BoolCasesOnCExp (0≤₂a)) THEN (BoolCasesOnCExp (0≤₂b))
|    THEN
|    (AbReduce 0)
|
|\
| 3. 0≤a
| 4. 0≤b
| ⊢  a | b ⟺ a | b  by Auto
|
|\
| 3. 0≤a
| 4. b<0
| ⊢  a | -b ⟺ a | b
|   by RWH
|      (RevLemmaC Thm* ∀a,b:ℤ. a | b ⟺ a | -b    {divides_invar_2})
|      0
|
|\
| 3. a<0
| 4. 0≤b
| ⊢  -a | b ⟺ a | b
|   by RWH
|      (RevLemmaC Thm* ∀a,b:ℤ. a | b ⟺ -a | b    {divides_invar_1})
|      0
|
.\
. 3. a<0
. 4. b<0
. ⊢  -a | -b ⟺ a | b
.   by (RWH
.       (RevLemmaC Thm* ∀a,b:ℤ. a | b ⟺ a | -b    {divides_invar_2})
.       0)
.      THEN
.      (RWH
.       (RevLemmaC Thm* ∀a,b:ℤ. a | b ⟺ -a | b    {divides_invar_1})
.       0)
END
```