```
rem_bounds_z  THM

⊢  ∀a:ℤ, b:ℤ⁻⁰. |a rem b|<|b|
| by Auto THEN Decide: 0≤a | 0≤b THEN ElimAbsVal Auto 0 ; Auto
|
1. a : ℤ
2. b : ℤ⁻⁰
⊢  |a rem b|<|b|
| by Decide: 0≤a | 0≤b THEN BoundRem Auto 0 THEN ElimAbsVal Auto 0
|
|\
| 3. 0≤a
| 4. 0≤b
| 5. (a rem b) ∈ ℕb
| ⊢  (a rem b)<b  by Auto
|
|\
| 3. 0≤a
| 4. ¬0≤b
| 5. (a rem b) ∈ ℕ(-b)
| ⊢  (a rem b)<-b  by Auto
|
|\
| 3. ¬0≤a
| 4. 0≤b
| 5. -(a rem b) ∈ ℕb
| ⊢  -(a rem b)<b  by Auto
|
.\
. 3. ¬0≤a
. 4. ¬0≤b
. 5. -(a rem b) ∈ ℕ(-b)
. ⊢  -(a rem b)<-b  by Auto
END
```