```
gcd_wf  THM

⊢  ∀a,b:ℤ. gcd(a;b) ∈ ℤ  by UnivCD THEN OnVar ‘a’ MoveToConcl
|
1. b : ℤ
⊢  ∀a:ℤ. gcd(a;b) ∈ ℤ
| by (OnVar ‘b’ (RankInd (λi.|i|) ℕ CompNatInd)) THEN (Analyze 0)
|
2. ∀b1:ℤ. |b1|<|b| ⇒ (∀a:ℤ. gcd(a;b1) ∈ ℤ)
3. a : ℤ
⊢  gcd(a;b) ∈ ℤ  by RecCaseSplit ‘gcd‘
|
|\
| .....truecase .....
| 4. b = 0
| ⊢  a ∈ ℤ  by Auto
|
.\
. .....falsecase .....
. 4. ¬b = 0
. ⊢  gcd(b;a rem b) ∈ ℤ  by BackThru 2
. |
. ⊢  |a rem b|<|b|
.   by BackThru Thm* ∀a:ℤ, n:ℤ^-0. |a rem n|<|n|    {rem_mag_bound}
END
```