```
gcd_mul  THM

⊢  ∀a,b,n:ℤ. (n•gcd(a;b)) ∼ gcd(n•a;n•b)  by UnivCD
|
1. a : ℤ
2. b : ℤ
3. n : ℤ
⊢  (n•gcd(a;b)) ∼ gcd(n•a;n•b)
| by (FunElim (gcd(a;b) = y)) THEN (FunElim (gcd(n•a;n•b) = z))
|
4. y : ℤ
5. GCD(a;b;y)
6. z : ℤ
7. GCD(n•a;n•b;z)
⊢  (n•y) ∼ z
  by (Using [`n',n]
      (FwdThru
       Thm* ∀a,b,y,n:ℤ. GCD(a;b;y) ⇒ GCD(n•a;n•b;n•y)    {gcd_p_mul}
       [5]))
     THEN
     (FwdThru
      Thm* ∀a,b,y1,y2:ℤ. GCD(a;b;y1) ⇒ GCD(a;b;y2) ⇒ (y1 ∼ y2)
      {gcd_unique}
      [-1;-2])
END
```