```
iso_pair_rep_to_abs  THM

⊢  ∀'a,'b:S, P:('b→𝔹), rep:('a→'b), abs:('b→'a), a:'a, r:'b.
|  iso_pair('a;'b;P;rep;abs) ⇒ rep(a) = r ⇒ a = abs(r)
| by Id THEN StrongAuto
|
1. 'a : S
2. 'b : S
3. P : 'b→𝔹
4. rep : 'a→'b
5. abs : 'b→'a
6. a : 'a
7. r : 'b
8. iso_pair('a;'b;P;rep;abs)
9. rep(a) = r
⊢  a = abs(r)
| by FwdThru
|    Thm* ∀'a,'b:S, P:('b→𝔹), rep:('a→'b), abs:('b→'a).
|         iso_pair('a;'b;P;rep;abs)
|         ⇒
|         (∀a:'a. abs(rep(a)) = a)
|         & (∀r:'b. P(r) = ((rep(abs(r))) =_b r))
|    {iso_pair_char}
|    [8]
|    THEN
|    Unab ['iso_pair']
|    THEN
|    StrongAuto
|
1. 'a : S
2. 'b : S
3. P : 'b→𝔹
4. rep : 'a→'b
5. abs : 'b→'a
6. a : 'a
7. r : 'b
8. ∀r:'b. abs(r) = (@a:'a. (r = rep(a)))
9. type_definition('b;'a;P;rep)
10. rep(a) = r
11. ∀a:'a. abs(rep(a)) = a
12. ∀r:'b. P(r) = ((rep(abs(r))) =_b r)
⊢  a = abs(r)  by RevH 10 0 THEN StrongAuto
|
1. 'a : S
2. 'b : S
3. P : 'b→𝔹
4. rep : 'a→'b
5. abs : 'b→'a
6. a : 'a
7. r : 'b
8. ∀r:'b. abs(r) = (@a:'a. (r = rep(a)))
9. type_definition('b;'a;P;rep)
10. rep(a) = r
11. ∀a:'a. abs(rep(a)) = a
12. ∀r:'b. P(r) = ((rep(abs(r))) =_b r)
```

```
⊢  a = abs(rep(a))  by SwapEquands 0 THEN BackThru -2 THEN StrongAuto
END
```