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proddeq-property  THM

⊢  ∀A,B:Type, a:EqDecider(A), b:EqDecider(B), p,q:(A×B).
|  p = q ⟺ proddeq(a;b)(p,q)
| by UnivCD THEN Unfold ‘proddeq‘ 0 THEN Reduce 0 THEN Analyze 6
|    THEN
|    Analyze 5
|    THEN
|    Analyze 4
|    THEN
|    Analyze 3
|    THEN
|    Reduce 0
|    THEN
|    RW assert_pushdownC 0
|    THEN
|    Try (Analyze THEN BackThruSomeHyp THEN Trivial)
|    THEN
|    Try BackThruSomeHyp
|
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| 1. A : Type
| 2. B : Type
| 3. e1 : A→A→𝔹
| 4. ∀x,y:A. x = y ⟺ e1(x,y)
| 5. eq : B→B→𝔹
| 6. ∀x,y:B. x = y ⟺ eq(x,y)
| 7. p1 : A
| 8. p2 : B
| 9. q1 : A
| 10. q2 : B
| 11. <p1,p2> = <q1,q2>
| ⊢  p1 = q1
|   by ApFunToHypEquands ‘z’ 1of(z) A -1 THEN Reduce -1 THEN Trivial
|
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. 1. A : Type
. 2. B : Type
. 3. e1 : A→A→𝔹
. 4. ∀x,y:A. x = y ⟺ e1(x,y)
. 5. eq : B→B→𝔹
. 6. ∀x,y:B. x = y ⟺ eq(x,y)
. 7. p1 : A
. 8. p2 : B
. 9. q1 : A
. 10. q2 : B
. 11. <p1,p2> = <q1,q2>
. ⊢  p2 = q2
.   by ApFunToHypEquands ‘z’ 2of(z) B -1 THEN Reduce -1 THEN Trivial
END
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