

Inference at * 1 1
of proof for Lemma order_split:

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1. T : Type
2. R : T → T → ℙ
3. ∀a:T. R(a,a)
4. ∀a, b, c:T. R(a,b) ⇒ R(b,c) ⇒ R(a,c)
5. ∀x, y:T. R(x,y) ⇒ R(y,x) ⇒ (x = y)
6. ∀x, y:T. Dec(x = y)
7. a : T
8. b : T
9. R(a,b)
10. a = b
⊢(R(a,b) & (¬R(b,a))) ∨ (a = b)
  by ((ProveProp)
    CollapseTHEN ((Auto_aux (first_nat 1:n) ((first_nat 1:n),(first_nat
      3:n)) (first_tok :t) inil_term)))
.
```