```
⊢ ∀[P,Q:ℙ].  (((¬P) ∨ (¬Q)) ⇒ (¬(P ∧ Q)))
|
BY RepeatFor 2 ((UD THENA Auto))
|
[1]. P: ℙ
[2]. Q: ℙ
⊢ ((¬P) ∨ (¬Q)) ⇒ (¬(P ∧ Q))
|
BY RepeatFor 2 ((D 0 THENA Auto))
|
3. (¬P) ∨ (¬Q)
4. P ∧ Q
⊢ False
|
BY D 4
|
4. P
5. Q
⊢ False
|
BY D 3
|\
| 3. ¬P
| ⊢ False
| |
1 BY (Unfold ‘not‘ 3 THEN D 3)
| |\
| | 3. P
| | 4. Q
| | ⊢ P
| | |
1 2 BY NthHyp 3
|  \
|   3. P
|   4. Q
|   5. False
|   ⊢ False
|   |
1   BY NthHyp 5
 \
  3. ¬Q
  ⊢ False
  |
  BY (Unfold ‘not‘ 3 THEN D 3)·
  |\
  | 3. P
  | 4. Q
  | ⊢ Q
  | |
  1 BY NthHyp 4
   \
    3. P
    4. Q
```

```
5. False
⊢ False
|
BY NthHyp 5
```

```
Extract: λf,g. let p,q = g in case f of inl(np) => np p | inr(nq) => nq q
    where f : (¬P) ∨ (¬Q)
          g : P ∧ Q
          p : P
          q : Q
         np : ¬P ≡ (P ⇒ False)
         nq : ¬Q ≡ (Q ⇒ False)
```