Proofs III

Construct proofs for each of the following **theorems** using conditional proof or indirect proof. Use the general-purpose proof form or do this on paper.

1. A ⊃ (B ⊃ A)
2. (C ⊃ D) ≡ (~C v D)
3. ((A ⊃ B) & (B ⊃ A)) ⊃ (A ≡ B)
4. (C ≡ ~D) ⊃ ~(C ≡ D) *This one isn't easy!*
5. ~((A v ~A) ⊃ (A & ~A))
6. ~(A & ~B) ⊃ (A ⊃ B)
7. A ⊃ (A v ((B v (C ≡ ~P)) & Q)) *This looks hard, but it's really easy!*
8. (E ⊃ F) ≡ ~(~F & E)
9. ((~R v S) & (T v ~S)) ⊃ (~T ⊃ ~R)
10. [(C v ~D) & (~C & D)] ⊃ [C ≡ ~(D & ~C)]

table of contents List of Exercises