

1: $A=B$ assumption

2: $A \subseteq B$ Conjectured Rule $=-E(L)$ 1

3: $B \subseteq A$ Conjectured Rule $=-E(R)$ 1

4: $A \subseteq B \wedge B \subseteq A$ $\wedge-I$ 2,3

5: $A=B \rightarrow A \subseteq B \wedge B \subseteq A$ $\rightarrow-I$ 1-4

6: $A \subseteq B \wedge B \subseteq A$ assumption

7: $A \subseteq B$ $\wedge-E(L)$ 6

8: $B \subseteq A$ $\wedge-E(R)$ 6

9: $A=B$ Conjectured Rule $=-I$ 7,8

10: $A \subseteq B \wedge B \subseteq A \rightarrow A=B$ $\rightarrow-I$ 6-9

11: $A=B \leftrightarrow A \subseteq B \wedge B \subseteq A$ $\leftrightarrow-I$ 5,10