1. A v (B v C) |– A v (B v (C v D))

A v (B v C) (ПА) |– (A v B) v C |– D v ((A v B) v C) |– ((A v B) v C) v D |– (A v B) v

(C v D) |– A v (B v (C v D))

1. A v (B v (A v C)) |– B v (A v C)

A v (B v (A v C)) (ПK) |– (B v (A v C)) v A |– C v (B v (A v C)) v A |– ((B v (A v C)) v A) v C |–

(B v (A v C)) v (A v C) |– (A v C) v (B v (A v C)) |– B v ((A v C) v (B v (A v C))) |–

(B v (A v C)) v (B v (A v C)) |– B v (A v C)

1. A v (B v C) |– A v (C v B)

(A v (B v C)) |– (A v B) v C |– C v (A v B) |– A v (C v (A v B)) |– (A v C) v (A v B) |—

(A v B) v (A v C) |– A v (B v (A v C)) (2) |– B v (A v C) |– (A v C) v B |– A v (C v B)

1. |– !(A v A) -> A

!(A v A ) v (A v A ) |– A v (!(A v A ) v (A v A )) |– (!(A v A ) v (A v A )) v A |­–

!(A v A ) v ((!(A v A ) v (A v A )) v A) |– (!(A v A) v A) v (!(A v A) v A) |– !(A v A) -> A

1. !(!A v B) v C |– A v C

|– !A v A |– A v A! |– B v (A v A!) |– (B v A) v !A |– !A v (B v A) |– (!A v B) v A

(!A v B) v A, !(!A v B) v C |– A v C