

## t2\_jordan4

(TMXS6ruuJ43GQbAGYZtkBJxam495WqdHMZS)

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Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_nat\_d : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_nat\_d : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow ((r1\_xxreal\_0 X0 X1) \Rightarrow (k7\_nat\_d X1 (k7\_nat\_d X1 X0) = X0))) \quad (1)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow (\forall X2.(v7\_ordinal1 X2) \Rightarrow (\neg(r1\_xxreal\_0 X0 X1) \wedge ((\neg r1\_xxreal\_0 X2 X1) \wedge (r1\_xxreal\_0 (k7\_nat\_d X2 X0) (k7\_nat\_d X1 X0)))))) \quad (2)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow (\forall X2.(v7\_ordinal1 X2) \Rightarrow ((r1\_xxreal\_0 X0 X1) \Rightarrow (r1\_xxreal\_0 (k7\_nat\_d X2 X1) (k7\_nat\_d X2 X0)))) \quad (3)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow (\forall X2.(v7\_ordinal1 X2) \Rightarrow ((r1\_xxreal\_0 X0 X1) \Rightarrow (k7\_nat\_d (k2\_xcmplx\_0 X1 X2) X0 = k6\_xcmplx\_0 (k2\_xcmplx\_0 X1 X2) X0)))) \quad (4)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow ((k7\_nat\_d X0 X1 = k6\_numbers) \Rightarrow (r1\_xxreal\_0 X0 X1))) \quad (5)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (\forall X2.(v1\_xreal\_0 X2) \Rightarrow ((r1\_xxreal\_0 X0 k6\_numbers) \wedge (r1\_xxreal\_0 X1 X2) \Rightarrow (r1\_xxreal\_0 (k2\_xcmplx\_0 X1 X0) X2)))) \quad (6)$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.(v7\_ordinal1\ X1)\Rightarrow(k7\_nat\_d\ (k2\_xcmplx\_0\ X0\ X1)\ X1 = X0)) \quad (7)$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(r1\_xxreal\_0\ k6\_numbers\ X0) \quad (8)$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(k4\_nat\_d\ X0\ X0 = k6\_numbers) \quad (9)$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.(v7\_ordinal1\ X1)\Rightarrow((\neg r1\_xxreal\_0\ X1\ X0)\Rightarrow(k4\_nat\_d\ X0\ X1 = X0))) \quad (10)$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.(v7\_ordinal1\ X1)\Rightarrow(\forall X2.(v7\_ordinal1\ X2)\Rightarrow((k4\_nat\_d\ X0\ X1 = k6\_numbers)\Rightarrow(k4\_nat\_d\ (k2\_xcmplx\_0\ X0\ X2)\ X1 = k4\_nat\_d\ X2\ X1)))) \quad (11)$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.(v7\_ordinal1\ X1)\Rightarrow(\neg(r1\_xxreal\_0\ X0\ X1)\wedge(\forall X2.(v7\_ordinal1\ X2)\Rightarrow(X1\neq k2\_xcmplx\_0\ X0\ X2)))) \quad (12)$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0\ X0)\Rightarrow(\forall X1.(v1\_xxreal\_0\ X1)\Rightarrow((((r1\_xxreal\_0\ k6\_numbers\ X0)\Rightarrow(r1\_xxreal\_0\ X1\ (k2\_xcmplx\_0\ X0\ X1)))\wedge(((r1\_xxreal\_0\ X1\ (k2\_xcmplx\_0\ X0\ X1))\Rightarrow(r1\_xxreal\_0\ k6\_numbers\ X0))\wedge((\neg(\neg r1\_xxreal\_0\ X0\ k6\_numbers)\wedge(r1\_xxreal\_0\ (k2\_xcmplx\_0\ X0\ X1)\ X1))\wedge((\neg(\neg r1\_xxreal\_0\ (k2\_xcmplx\_0\ X0\ X1)\ X1)\wedge(r1\_xxreal\_0\ X0\ k6\_numbers))\wedge(((r1\_xxreal\_0\ k6\_numbers\ X0)\Rightarrow(r1\_xxreal\_0\ (k6\_xcmplx\_0\ X1\ X0)\ X1))\wedge(((r1\_xxreal\_0\ (k6\_xcmplx\_0\ X1\ X0)\ X1)\Rightarrow(r1\_xxreal\_0\ k6\_numbers\ X0))\wedge((\neg(\neg r1\_xxreal\_0\ X0\ k6\_numbers)\wedge(r1\_xxreal\_0\ X1\ (k6\_xcmplx\_0\ X1\ X0)))\wedge(\neg(\neg r1\_xxreal\_0\ X1\ (k6\_xcmplx\_0\ X1\ X0))\wedge(r1\_xxreal\_0\ X0\ k6\_numbers)))))))))) \quad (13)$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0\ X0)\Rightarrow(\forall X1.(v1\_xxreal\_0\ X1)\Rightarrow(\forall X2.(v1\_xxreal\_0\ X2)\Rightarrow((r1\_xxreal\_0\ X0\ (k6\_xcmplx\_0\ X1\ X2))\Rightarrow(r1\_xxreal\_0\ (k2\_xcmplx\_0\ X0\ X2)\ X1)))) \quad (14)$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(v1\_xxreal\_0\ X0) \quad (15)$$

**Theorem 1**

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.(v7\_ordinal1\ X1)\Rightarrow((r1\_xreal\_0\ X1\ X0)\Rightarrow((r1\_xreal\_0\ (k2\_xcmplx\_0\ X1\ X1)\ X0)\vee((k4\_nat\_d\ X0\ X1 = k6\_xcmplx\_0\ X0\ X1)\wedge(k4\_nat\_d\ X0\ X1 = k7\_nat\_d\ X0\ X1))))))$$