

t10\_jordan8  
(TMY1DQ5viRfXDAvwWoVtNxGEczDPAzGr9Us)

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Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k15\_euclid : \iota \Rightarrow \iota$  be given. Let  $np\_2 : \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $np\_4 : \iota$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_jordan8 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k2\_newton : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $np\_3 : \iota$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $k1\_newton : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v6\_membered : \iota \Rightarrow o$  be given. Let  $v1\_matrix\_1 : \iota \Rightarrow o$  be given. Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_finseq\_2 : \iota \Rightarrow \iota$  be given. Let  $k1\_matrix\_1 : \iota \Rightarrow \iota$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_matrix\_1 : \iota \Rightarrow \iota$  be given. Let  $k3\_matrix\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k19\_euclid : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_pscomp\_1 : \iota \Rightarrow \iota$  be given. Let  $k4\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k13\_complex1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k8\_pscomp\_1 : \iota \Rightarrow \iota$  be given. Let  $k5\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_pscomp\_1 : \iota \Rightarrow \iota$  be given. Let  $k7\_pscomp\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (r1\_xxreal\_0 (k1\_nat\_1 X0 np\_1) (k2\_newton np\_2 X0)) \quad (1)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (\forall X2.(v1\_xreal\_0 X2) \Rightarrow ((r1\_xxreal\_0 X0 X1) \Leftrightarrow (r1\_xxreal\_0 (k2\_xcmplx\_0 X0 X2) (k2\_xcmplx\_0 X1 X2)))))) \quad (2)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow (\forall X2.(v7\_ordinal1 X2) \Rightarrow ((r1\_xxreal\_0 X0 X1) \Rightarrow (r1\_xxreal\_0 X0 (k2\_xcmplx\_0 X1 X2)))))) \quad (3)$$

Assume the following.

$$\begin{aligned} & ((v2\_xreal\_0 \ np\_3) \wedge (m2\_subset\_1 \ np\_3 \ k1\_numbers \ k5\_numbers)) \wedge \\ & ((m1\_subset\_1 \ np\_3 \ k5\_numbers) \wedge (m1\_subset\_1 \ np\_3 \ k1\_numbers)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & ((v2\_xreal\_0 \ np\_2) \wedge (m2\_subset\_1 \ np\_2 \ k1\_numbers \ k5\_numbers)) \wedge \\ & ((m1\_subset\_1 \ np\_2 \ k5\_numbers) \wedge (m1\_subset\_1 \ np\_2 \ k1\_numbers)) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & ((v2\_xreal\_0 \ np\_1) \wedge (m2\_subset\_1 \ np\_1 \ k1\_numbers \ k5\_numbers)) \wedge \\ & ((m1\_subset\_1 \ np\_1 \ k5\_numbers) \wedge (m1\_subset\_1 \ np\_1 \ k1\_numbers)) \end{aligned} \quad (6)$$

Assume the following.

$$k2\_xcmplx\_0 \ np\_1 \ np\_3 = np\_4 \quad (7)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((m1\_subset\_1 \ X0 \ k1\_numbers) \wedge (v7\_ordinal1 \\ & \ X1)) \Rightarrow (k2\_newton \ X0 \ X1 = k1\_newton \ X0 \ X1) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v7\_ordinal1 \ X0) \wedge (m1\_subset\_1 \ X1 \ k5\_numbers)) \Rightarrow \\ & (k1\_nat\_1 \ X0 \ X1 = k2\_xcmplx\_0 \ X0 \ X1) \end{aligned} \quad (10)$$

Assume the following.

$$v6\_membered \ k4\_ordinal1 \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v7\_ordinal1 \ X0) \wedge (v7\_ordinal1 \ X1)) \Rightarrow ( \\ & \ v7\_ordinal1 \ (k1\_newton \ X0 \ X1)) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v7\_ordinal1 \ X0) \wedge (v7\_ordinal1 \ X1)) \Rightarrow ( \\ & \ v7\_ordinal1 \ (k2\_xcmplx\_0 \ X0 \ X1)) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((m1\_subset\_1 \ X0 \ (k1\_zfmisc\_1 \ (u1\_struct\_0 \\ & \ (k15\_euclid \ np\_2)))) \wedge (v7\_ordinal1 \ X1)) \Rightarrow ((v1\_matrix\_1 \ (k1\_jordan8 \\ & \ X0 \ X1)) \wedge (m2\_finseq\_1 \ (k1\_jordan8 \ X0 \ X1) \ (k3\_finseq\_2 \ (u1\_struct\_0 \\ & \ (k15\_euclid \ np\_2)))))) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid \\
& \quad np\_2)))) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow (\forall X2.((v1\_matrix\_1 \\
& X2) \wedge (m2\_finseq\_1 X2 (k3\_finseq\_2 (u1\_struct\_0 (k15\_euclid np\_2)))))) \Rightarrow \\
& ((X2 = k1\_jordan8 X0 X1) \Leftrightarrow ((k3\_finseq\_1 X2 = k1\_nat\_1 (k2\_newton \\
& \quad np\_2 X1) np\_3) \wedge ((k3\_finseq\_1 X2 = k1\_matrix\_1 X2) \wedge (\forall X3. \\
& \quad (v7\_ordinal1 X3) \Rightarrow (\forall X4.(v7\_ordinal1 X4) \Rightarrow ((k4\_tarski X3 \\
& \quad X4 \in k2\_matrix\_1 X2) \Rightarrow (k3\_matrix\_1 (u1\_struct\_0 (k15\_euclid np\_2)) \\
& \quad X2 X3 X4 = k19\_euclid (k7\_real\_1 (k6\_pscomp\_1 X0) (k4\_real\_1 (k13\_complex1 \\
& \quad (k9\_real\_1 (k8\_pscomp\_1 X0) (k6\_pscomp\_1 X0)) (k2\_newton np\_2 \\
& \quad X1)) (k5\_real\_1 X3 np\_2))) (k7\_real\_1 (k9\_pscomp\_1 X0) (k4\_real\_1 \\
& \quad (k13\_complex1 (k9\_real\_1 (k7\_pscomp\_1 X0) (k9\_pscomp\_1 X0)) ( \\
& \quad \quad k2\_newton np\_2 X1)) (k5\_real\_1 X4 np\_2))))))))))))) \\
& \hspace{15em} (15)
\end{aligned}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xcmplx\_0 X0) \wedge (v1\_xcmplx\_0 X1)) \Rightarrow (k2\_xcmplx\_0 X0 X1 = k2\_xcmplx\_0 X1 X0) \quad (16)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (v1\_xcmplx\_0 X0) \quad (17)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (v1\_xreal\_0 X0) \quad (18)$$

Assume the following.

$$\forall X0.(v6\_membered X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 X0) \Rightarrow (v7\_ordinal1 X1)) \quad (19)$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.((\neg v1\_xboole\_0 X0) \wedge (m1\_subset\_1 X0 (k1\_zfmisc\_1 ( \\
& \quad u1\_struct\_0 (k15\_euclid np\_2)))))) \Rightarrow (\forall X1.(v7\_ordinal1 \\
& X1) \Rightarrow (r1\_xxreal\_0 np\_4 (k3\_finseq\_1 (k1\_jordan8 X0 X1))))
\end{aligned}$$