

l56_jordan3 (TMSkXwCDKYdCburWD-
HcMft1EaPvFwKq5WZX)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k3_finseq_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_nat_d : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\ & (\forall X1.(v7_ordinal1 X1) \Rightarrow ((X1 \in k1_relset_1 k5_numbers X0) \Leftrightarrow \\ & ((r1_xxreal_0 np_1 X1) \wedge (r1_xxreal_0 X1 (k3_finseq_1 X0)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (r1_xxreal_0 X0 (k2_xcmplx_0 X0 X1))) \quad (2)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m2_finseq_1 X1 X0) \Rightarrow \\
& (\forall X2.(m1_subset_1 X2 k5_numbers) \Rightarrow (\forall X3.(m1_subset_1 \\
& X3 k5_numbers) \Rightarrow (((r1_xxreal_0 np_1 X2) \wedge (r1_xxreal_0 X2 (k3_finseq_1 \\
& X1)) \wedge (r1_xxreal_0 np_1 X3) \wedge (r1_xxreal_0 X3 (k3_finseq_1 X1)))) \Rightarrow \\
& ((k1_funct_1 (k3_finseq_6 X0 X1 X2 X3) np_1 = k1_funct_1 X1 X2) \wedge \\
& (((r1_xxreal_0 X2 X3) \Rightarrow ((k3_finseq_1 (k3_finseq_6 X0 X1 X2 X3) = \\
& k2_nat_1 (k7_nat_d X3 X2) np_1) \wedge (\forall X4.(m1_subset_1 X4 k5_numbers) \Rightarrow \\
& (((r1_xxreal_0 np_1 X4) \wedge (r1_xxreal_0 X4 (k3_finseq_1 (k3_finseq_6 \\
& X0 X1 X2 X3)))) \Rightarrow (k1_funct_1 (k3_finseq_6 X0 X1 X2 X3) X4 = k1_funct_1 \\
& X1 (k7_nat_d (k2_nat_1 X4 X2) np_1)))))) \wedge ((\neg r1_xxreal_0 X2 X3) \Rightarrow \\
& ((k3_finseq_1 (k3_finseq_6 X0 X1 X2 X3) = k2_nat_1 (k7_nat_d X2 X3) \\
& np_1) \wedge (\forall X4.(m1_subset_1 X4 k5_numbers) \Rightarrow (((r1_xxreal_0 \\
& np_1 X4) \wedge (r1_xxreal_0 X4 (k3_finseq_1 (k3_finseq_6 X0 X1 X2 X3)))) \Rightarrow \\
& (k1_funct_1 (k3_finseq_6 X0 X1 X2 X3) X4 = k1_funct_1 X1 (k2_nat_1 \\
& (k7_nat_d X2 X4) np_1))))))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& ((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge \\
& ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers))
\end{aligned} \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \tag{5}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{6}$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow (k4_finseq_1 X0 = k9_xtuple_0 X0) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k5_numbers) \wedge (v7_ordinal1 X1)) \Rightarrow (k2_nat_1 X0 X1 = k2_xcmplx_0 X0 X1) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1) \wedge (v4_relat_1 X1 X0)) \Rightarrow (k1_relset_1 X0 X1 = k9_xtuple_0 X1) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0) \Rightarrow ((v1_funct_1 X1) \wedge ((v1_finseq_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X0)))))) \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge(v1_funct_1 X1)\wedge(v1_finseq_1 X1)) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 X0)\wedge(v7_ordinal1 X1))\Rightarrow(m1_subset_1 (k7_nat_d X0 X1) k5_numbers) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k5_numbers)\wedge(v7_ordinal1 X1))\Rightarrow(k2_nat_1 X0 X1 = k2_nat_1 X1 X0) \quad (13)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1)\Rightarrow(v7_ordinal1 X0) \quad (14)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow((v1_relat_1 X0)\wedge((v4_relat_1 X0 k5_numbers)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))) \quad (15)$$

Theorem 1

$$\forall X0.(m1_subset_1 X0 k5_numbers)\Rightarrow(\forall X1.(m1_subset_1 X1 k5_numbers)\Rightarrow(\forall X2.(\neg v1_xboole_0 X2)\Rightarrow(\forall X3.(m2_finseq_1 X3 X2)\Rightarrow(((X0 \in k4_finseq_1 X3)\wedge(X1 \in k4_finseq_1 X3))\Rightarrow(r1_xreal_0 np_1 (k3_finseq_1 (k3_finseq_6 X2 X3 X0 X1)))))))$$