

t77_jordan1a
(TMbQi8STHBN3ZP5c45EfwZEw4tx1KjxzaVZ)

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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 $v2_connsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k15_euclid : \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $v2_compts_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_sppol_1 : \iota \Rightarrow o$ be given. Let $v2_sppol_1 : \iota \Rightarrow o$ 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 $k9_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_topreal1 : \iota \Rightarrow \iota$ be given. Let $k3_topreal1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_jordan9 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k17_euclid : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k18_euclid : \iota \Rightarrow \iota$ be given. Let $r1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \neg (X0 \in X1) \wedge (v1_xboole_0 X1) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. (m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (\forall X1. (m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow \\ & (((k17_euclid X0 = k17_euclid X1) \wedge (k18_euclid X0 = k18_euclid X1)) \Rightarrow \\ & (X0 = X1))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. (m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1. ((v2_connsp_1 \\ & X1 (k15_euclid np_2)) \wedge ((v2_compts_1 X1 (k15_euclid np_2)) \wedge \\ & ((\neg v1_sppol_1 X1) \wedge ((\neg v2_sppol_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (u1_struct_0 (k15_euclid np_2)))))))))) \Rightarrow (r1_subset_1 X1 (k3_topreal1 \\ & np_2 (k1_jordan9 X1 X0)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (\neg (\neg r1_xboole_0 X0 X1) \wedge (\forall X2. \neg X2 \in \\ & k3_xboole_0 X0 X1)) \wedge (\neg (\exists X2. X2 \in k3_xboole_0 X0 X1) \wedge (r1_xboole_0 \\ & X0 X1)) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (5)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow ((r1_xreal_0 X0 X1) \wedge (r1_xreal_0 X1 X0)) \Rightarrow (X0 = X1)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge (\neg v1_xboole_0 X1)) \Rightarrow ((r1_subset_1 X0 X1) \Leftrightarrow (r1_xboole_0 X0 X1)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 X0)) \Rightarrow (k9_subset_1 X0 X1 X2 = k3_xboole_0 X1 X2) \quad (9)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (10)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1) \wedge (v3_ordinal1 k4_ordinal1) \quad (11)$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \quad (12)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow (m1_subset_1 (k7_topreal1 X0) (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))) \quad (13)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (14)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow (m1_subset_1 (k17_euclid X0) k1_numbers) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k3_xboole_0 X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 \in X0) \wedge (X3 \in X1))) \quad (16)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\ & np_2)))) \Rightarrow ((X1 = k7_topreal1 X0) \Leftrightarrow (\forall X2.(m1_subset_1 X2 \\ & (u1_struct_0 (k15_euclid np_2))) \Rightarrow ((X2 \in X1) \Leftrightarrow ((r1_xxreal_0 (\\ & k17_euclid X2) (k17_euclid X0)) \wedge (k18_euclid X2 = k18_euclid X0)))))) \end{aligned} \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 X0)) \Rightarrow (k9_subset_1 X0 X1 X2 = k9_subset_1 X0 X2 X1) \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.k3_xboole_0 X0 X1 = k3_xboole_0 X1 X0 \quad (19)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xxreal_0 X0) \quad (20)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (21)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\ & ((v2_connsp_1 X1 (k15_euclid np_2)) \wedge ((v2_compts_1 X1 (k15_euclid \\ & np_2)) \wedge ((\neg v1_sppol_1 X1) \wedge ((\neg v2_sppol_1 X1) \wedge (m1_subset_1 X1 \\ & (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))))))) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 (k15_euclid np_2))) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (u1_struct_0 (k15_euclid np_2))) \Rightarrow (\neg (X2 \in X1) \wedge \\ & ((X3 \in k9_subset_1 (u1_struct_0 (k15_euclid np_2)) (k7_topreal1 \\ & X2) (k3_topreal1 np_2 (k1_jordan9 X1 X0))) \wedge (r1_xxreal_0 (k17_euclid \\ & X2) (k17_euclid X3)))))) \end{aligned}$$