

t51_jordan6
(TMNMpic9jKSiEdFuByohHCMVcS3j72tned9)

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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 $v1_topreal2 : \iota \Rightarrow o$ be given. Let $k9_jordan6 : \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_jordan6 : \iota \Rightarrow \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k18_pscomp_1 : \iota \Rightarrow \iota$ be given. Let $k22_pscomp_1 : \iota \Rightarrow \iota$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $r1_topreal1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k18_euclid : \iota \Rightarrow \iota$ be given. Let $k1_jordan5c : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_jordan6 : \iota \Rightarrow \iota$ be given. Let $k10_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_pscomp_1 : \iota \Rightarrow \iota$ be given. Let $k8_pscomp_1 : \iota \Rightarrow \iota$ be given. Let $k2_jordan5c : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. k2_xboole_0 (k3_xboole_0 X0 X1) (k4_xboole_0 X0 X1) = X0 \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. k4_xboole_0 (k2_xboole_0 X0 X1) X1 = k4_xboole_0 X0 X1 \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 X0)) \Rightarrow (k9_subset_1 X0 X1 X2 = k3_xboole_0 X1 X2) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (k7_subset_1 X0 X1 X2 = k4_xboole_0 X1 X2) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((m1_subset_1 X1 (k1_zfmisc_1 X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 X0))) \Rightarrow (k4_subset_1 X0 X1 X2 = k2_xboole_0 X1 X2) \quad (5)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow ((\neg v1_xboole_0 (k9_jordan6 X0)) \wedge (m1_subset_1 (k9_jordan6 X0) (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))))) \quad (6)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow ((\neg v1_xboole_0 (k8_jordan6 X0)) \wedge (m1_subset_1 (k8_jordan6 X0) (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))))) \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow & ((v1_topreal2 X0) \Rightarrow (\forall X1.((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))))) \Rightarrow \\ & ((X1 = k9_jordan6 X0) \Leftrightarrow ((r1_topreal1 (k15_euclid np_2) (k22_pscomp_1 X0) \\ & (k18_pscomp_1 X0) X1) \wedge ((k9_subset_1 (u1_struct_0 (k15_euclid np_2)) \\ & (k8_jordan6 X0) X1 = k2_tarski (k18_pscomp_1 X0) (k22_pscomp_1 X0)) \wedge \\ & ((k4_subset_1 (u1_struct_0 (k15_euclid np_2)) (k8_jordan6 X0) X1 = X0) \wedge \\ & (\neg r1_xxreal_0 (k18_euclid (k1_jordan5c (k8_jordan6 X0) (k6_jordan6 (k10_real_1 (k7_real_1 (k6_pscomp_1 X0) (k8_pscomp_1 X0)) np_2)) (k18_pscomp_1 X0) (k22_pscomp_1 X0))) (k18_euclid (k2_jordan5c X1 (k6_jordan6 (k10_real_1 (k7_real_1 (k6_pscomp_1 X0) (k8_pscomp_1 X0)) np_2)) (k22_pscomp_1 X0) (k18_pscomp_1 X0)))))))))) \quad (8) \end{aligned}$$

Assume the following.

$$\forall X0.\forall X1.k3_xboole_0 X0 X1 = k3_xboole_0 X1 X0 \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.k2_xboole_0 X0 X1 = k2_xboole_0 X1 X0 \quad (10)$$

Theorem 1

$$\begin{aligned} \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow & ((v1_topreal2 X0) \Rightarrow ((k9_jordan6 X0 = k2_xboole_0 (k7_subset_1 \\ & (u1_struct_0 (k15_euclid np_2)) X0 (k8_jordan6 X0)) (k2_tarski \\ & (k18_pscomp_1 X0) (k22_pscomp_1 X0))) \wedge (k8_jordan6 X0 = k2_xboole_0 \\ & (k7_subset_1 (u1_struct_0 (k15_euclid np_2)) X0 (k9_jordan6 X0)) \\ & (k2_tarski (k18_pscomp_1 X0) (k22_pscomp_1 X0)))))) \end{aligned}$$