

t17_toprealb
(TMK1RoDTbYpGrF9SuS96PepxWnJaGRnaKAo)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k8_toprealb : \iota \Rightarrow \iota$ be given. Let $k18_euclid : \iota \Rightarrow \iota$ be given. Let $k1_real_1 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k17_euclid : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k12_euclid : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ 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 $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $k11_arytm_3 : \iota$ be given. Let $v3_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & ((r1_xxreal_0 (k12_euclid X0) np_1) \Rightarrow ((k17_euclid X0 = k6_numbers) \vee \\ & ((k18_euclid X0 = k6_numbers) \vee ((\neg r1_xxreal_0 (k17_euclid X0) \\ & (k1_real_1 np_1)) \wedge ((\neg r1_xxreal_0 np_1 (k17_euclid X0)) \wedge ((\\ & \neg r1_xxreal_0 (k18_euclid X0) (k1_real_1 np_1)) \wedge (\neg r1_xxreal_0 \\ & np_1 (k18_euclid X0)))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & ((m1_subset_1 X0 (u1_struct_0 (k8_toprealb np_2))) \Rightarrow ((r1_xxreal_0 \\ & (k1_real_1 np_1) (k17_euclid X0)) \wedge ((r1_xxreal_0 (k17_euclid \\ & X0) np_1) \wedge ((r1_xxreal_0 (k1_real_1 np_1) (k18_euclid X0)) \wedge \\ & (r1_xxreal_0 (k18_euclid X0) np_1)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X0 k5_numbers)) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid X0))) \Rightarrow (\\ & (m1_subset_1 X1 (u1_struct_0 (k8_toprealb X0))) \Rightarrow (k12_euclid \\ & X1 = np_1))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 \ np_2) \wedge (m2_subset_1 \ np_2 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_2 \ k5_numbers) \wedge (m1_subset_1 \ np_2 \ k1_numbers)) \end{aligned} \quad (4)$$

Assume the following.

$$\neg v1_xboole_0 \ np_2 \quad (5)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 \ np_1) \wedge (m2_subset_1 \ np_1 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_1 \ k5_numbers) \wedge (m1_subset_1 \ np_1 \ k1_numbers)) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xxreal_0 \ X0) \wedge (v1_xxreal_0 \ X1)) \Rightarrow (r1_xxreal_0 \ X0 \ X0) \quad (7)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (8)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (9)$$

Assume the following.

$$\forall X0. (m1_subset_1 \ X0 \ k1_numbers) \Rightarrow (k1_real_1 \ X0 = k4_xcmplx_0 \ X0) \quad (10)$$

Assume the following.

$$k11_arytm_3 = k1_xboole_0 \quad (11)$$

Assume the following.

$$\forall X0. (m1_subset_1 \ X0 \ k1_numbers) \Rightarrow (k1_real_1 \ (k1_real_1 \ X0) = X0) \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v3_xxreal_0 \ X0) \wedge (v1_xreal_0 \ X0)) \Rightarrow ((v1_xcmplx_0 \\ & (k4_xcmplx_0 \ X0)) \wedge (\neg v2_xxreal_0 \ (k4_xcmplx_0 \ X0))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0. (m1_subset_1 \ X0 \ (u1_struct_0 \ (k15_euclid \ np_2))) \Rightarrow \\ & (m1_subset_1 \ (k18_euclid \ X0) \ k1_numbers) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0. (m1_subset_1 \ X0 \ (u1_struct_0 \ (k15_euclid \ np_2))) \Rightarrow \\ & (m1_subset_1 \ (k17_euclid \ X0) \ k1_numbers) \end{aligned} \quad (15)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow ((v3_xxreal_0 X0) \Leftrightarrow (\neg r1_xxreal_0 k6_numbers X0)) \quad (16)$$

Assume the following.

$$k1_xboole_0 = the (\lambda X0 : \iota.v1_xboole_0 X0) \quad (17)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xxreal_0 X0) \quad (18)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (19)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (((m1_subset_1 X0 (u1_struct_0 (k8_toprealb np_2))) \wedge (k18_euclid \\ & X0 = k1_real_1 np_1)) \Rightarrow (k17_euclid X0 = k6_numbers)) \end{aligned}$$