

t2_real_ns1 (TMcKcvjPCTB- WMeahY7d5QRfGS6S89TRJtfU)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k4_real_ns1 : \iota \Rightarrow \iota$ be given. Let $m2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k1_euclid : \iota \Rightarrow \iota$ be given. Let $k1_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_euclid : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_algstr_0 : \iota \Rightarrow o$ be given. Let $u1_algstr_0 : \iota \Rightarrow \iota$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_rlvect_1 : \iota \Rightarrow o$ be given. Let $l1_normsp_1 : \iota \Rightarrow o$ be given. Let $l2_normsp_0 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v1_normsp_1 : \iota \Rightarrow o$ be given. Let $k1_real_ns1 : \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $k5_euclid : \iota \Rightarrow \iota$ be given. Let $u1_rlvect_1 : \iota \Rightarrow \iota$ be given. Let $k2_real_ns1 : \iota \Rightarrow \iota$ be given. Let $u1_normsp_0 : \iota \Rightarrow \iota$ be given. Let $k3_real_ns1 : \iota \Rightarrow \iota$ be given. Let $k5_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. \forall X5. \\
 & ((\neg v1_xboole_0 X1) \wedge (\neg v1_xboole_0 X3) \wedge (((v1_funct_1 X4) \wedge ((v1_funct_2 X4 X0 X1) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \wedge ((v1_funct_1 X5) \wedge ((v1_funct_2 X5 X2 X3) \wedge (m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 X2 X3)))))) \Rightarrow ((r1_funct_2 X0 X1 X2 X3 X4 X5) \Leftrightarrow (X4 = X5))
 \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. (v7_ordinal1 X0) \Rightarrow (\neg v1_xboole_0 (k1_euclid X0)) \tag{2}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. (l1_algstr_0 X0) \Rightarrow ((v1_funct_1 (u1_algstr_0 X0)) \wedge ((v1_funct_2 (u1_algstr_0 X0) (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)) (u1_struct_0 X0)) \wedge (m1_subset_1 (u1_algstr_0 X0) (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)) (u1_struct_0 X0))))))
 \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.(l2_algstr_0 X0) \Rightarrow ((l2_struct_0 X0) \wedge (l1_algstr_0 X0)) \quad (4)$$

Assume the following.

$$\forall X0.(l1_rlvect_1 X0) \Rightarrow (l2_algstr_0 X0) \quad (5)$$

Assume the following.

$$\forall X0.(l1_normsp_1 X0) \Rightarrow ((l1_rlvect_1 X0) \wedge (l2_normsp_0 X0)) \quad (6)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow ((\neg v2_struct_0 (k4_real_ns1 X0)) \wedge ((v1_normsp_1 (k4_real_ns1 X0)) \wedge (l1_normsp_1 (k4_real_ns1 X0)))) \quad (7)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow ((v1_funct_1 (k1_real_ns1 X0)) \wedge ((v1_funct_2 (k1_real_ns1 X0) (k2_zfmisc_1 (k1_euclid X0) (k1_euclid X0)) (k1_euclid X0)) \wedge (m1_subset_1 (k1_real_ns1 X0) (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 (k1_euclid X0) (k1_euclid X0)) (k1_euclid X0)))))) \quad (8)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v1_normsp_1 X1) \wedge (l1_normsp_1 X1))) \Rightarrow ((X1 = k4_real_ns1 X0) \Leftrightarrow ((u1_struct_0 X1 = k1_euclid X0) \wedge ((k4_struct_0 X1 = k5_euclid X0) \wedge ((r1_funct_2 (k2_zfmisc_1 (u1_struct_0 X1) (u1_struct_0 X1)) (u1_struct_0 X1) (k2_zfmisc_1 (k1_euclid X0) (k1_euclid X0)) (k1_euclid X0) (u1_algstr_0 X1) (k1_real_ns1 X0)) \wedge ((r1_funct_2 (k2_zfmisc_1 k1_numbers (u1_struct_0 X1) (u1_struct_0 X1) (k2_zfmisc_1 k1_numbers (k1_euclid X0)) (k1_euclid X0) (u1_rlvect_1 X1) (k2_real_ns1 X0)) \wedge (r1_funct_2 (u1_struct_0 X1) k1_numbers (k1_euclid X0) k1_numbers (u1_normsp_0 X1) (k3_real_ns1 X0)))))))))) \quad (9)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (k2_zfmisc_1 (k1_euclid X0) (k1_euclid X0)) (k1_euclid X0)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 (k1_euclid X0) (k1_euclid X0)) (k1_euclid X0)))))) \Rightarrow ((X1 = k1_real_ns1 X0) \Leftrightarrow (\forall X2.(m2_finseq_2 X2 k1_numbers (k1_euclid X0)) \Rightarrow (\forall X3.(m2_finseq_2 X3 k1_numbers (k1_euclid X0)) \Rightarrow (k5_binop_1 (k1_euclid X0) X1 X2 X3 = k7_euclid X0 X2 X3)))))) \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1_algstr_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (k1_algstr_0 \\ & X0 X1 X2 = k5_binop_1 (u1_struct_0 X0) (u1_algstr_0 X0) X1 X2))) \end{aligned} \quad (11)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & (k4_real_ns1 X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ & (k4_real_ns1 X0))) \Rightarrow (\forall X3.(m2_finseq_2 X3 k1_numbers (k1_euclid \\ & X0)) \Rightarrow (\forall X4.(m2_finseq_2 X4 k1_numbers (k1_euclid X0)) \Rightarrow \\ & (((X1 = X3) \wedge (X2 = X4)) \Rightarrow (k1_algstr_0 (k4_real_ns1 X0) X1 X2 = k7_euclid \\ & X0 X3 X4)))))) \end{aligned}$$