

t50_ndiff_4

(TMJ5VChB3tN2Vxa6hRsji44TJeqTaNJYqk7)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k4_real_ns1 : \iota \Rightarrow \iota$ be given. Let $r1_ndiff_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_ndiff_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_ndiff_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k17_lopban_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_ndiff_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v7_struct_0 : \iota \Rightarrow o$ be given. Let $v13_algstr_0 : \iota \Rightarrow o$ be given. Let $v2_rlvect_1 : \iota \Rightarrow o$ be given. Let $v3_rlvect_1 : \iota \Rightarrow o$ be given. Let $v4_rlvect_1 : \iota \Rightarrow o$ be given. Let $v5_rlvect_1 : \iota \Rightarrow o$ be given. Let $v6_rlvect_1 : \iota \Rightarrow o$ be given. Let $v7_rlvect_1 : \iota \Rightarrow o$ be given. Let $v8_rlvect_1 : \iota \Rightarrow o$ be given. Let $v3_normsp_0 : \iota \Rightarrow o$ be given. Let $v4_normsp_0 : \iota \Rightarrow o$ be given. Let $v2_normsp_1 : \iota \Rightarrow o$ be given. Let $l1_normsp_1 : \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_normsp_1 : \iota \Rightarrow o$ be

given. Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v7_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge \\
& ((v5_rlvect_1 X0) \wedge ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v3_normsp_0 X0) \wedge ((v4_normsp_0 X0) \wedge ((v2_normsp_1 X0) \wedge \\
& (l1_normsp_1 X0)))))))))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((\neg v7_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge ((v5_rlvect_1 X1) \wedge ((v6_rlvect_1 X1) \wedge ((v7_rlvect_1 X1) \wedge ((v8_rlvect_1 X1) \wedge ((v3_normsp_0 X1) \wedge \\
& ((v4_normsp_0 X1) \wedge ((v2_normsp_1 X1) \wedge (l1_normsp_1 X1)))))))))) \Rightarrow \\
& (\forall X2.(m1_subset_1 X2 k1_numbers) \Rightarrow (\forall X3.((v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers (u1_struct_0 X0)))) \Rightarrow ((r1_ndiff_3 X0 X3 X2) \Rightarrow (\forall X4.((v1_funct_1 X4) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1)))) \Rightarrow ((r1_ndiff_1 X0 X1 X4 (k7_partfun1 (u1_struct_0 X0) X3 X2) \Rightarrow ((r1_ndiff_3 X1 (k1_partfun1 k1_numbers (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X1) X3 X4) X2 = k17_lopban_1 X0 X1 (k3_ndiff_1 X0 X1 X4 (k7_partfun1 (u1_struct_0 X0) X3 X2) (k1_ndiff_3 X0 X3 X2)))))))))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1))
\end{aligned} \tag{2}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{3}$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1) \wedge (v3_ordinal1 k4_ordinal1) \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v7_ordinal1 X0) \Rightarrow ((\neg v2_struct_0 (k4_real_ns1 X0)) \wedge ((v13_algstr_0 (k4_real_ns1 X0)) \wedge ((v2_rlvect_1 (k4_real_ns1 X0)) \wedge ((v3_rlvect_1 (k4_real_ns1 X0)) \wedge ((v4_rlvect_1 (k4_real_ns1 X0)) \wedge ((v5_rlvect_1 (k4_real_ns1 X0)) \wedge ((v6_rlvect_1 (k4_real_ns1 X0)) \wedge ((v7_rlvect_1 (k4_real_ns1 X0)) \wedge ((v8_rlvect_1 (k4_real_ns1 X0)) \wedge ((v3_normsp_0 (k4_real_ns1 X0)) \wedge ((v4_normsp_0 (k4_real_ns1 X0)) \wedge ((v1_normsp_1 (k4_real_ns1 X0)) \wedge (v2_normsp_1 (k4_real_ns1 X0))))))))))))))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v1_xboole_0 X0) \wedge (v7_ordinal1 X0)) \Rightarrow ((\neg v2_struct_0 (k4_real_ns1 X0)) \wedge ((\neg v7_struct_0 (k4_real_ns1 X0)) \wedge (v1_normsp_1 (k4_real_ns1 X0))))
\end{aligned} \tag{6}$$

Assume the following.

$$\neg v1_xboole_0 \ k1_numbers \quad (7)$$

Assume the following.

$$m1_subset_1 \ k5_numbers \ (k1_zfmisc_1 \ k1_numbers) \quad (8)$$

Assume the following.

$$\forall X0.(v7_ordinal1 \ X0) \Rightarrow ((\neg v2_struct_0 \ (k4_real_ns1 \ X0)) \wedge ((v1_normsp_1 \ (k4_real_ns1 \ X0)) \wedge (l1_normsp_1 \ (k4_real_ns1 \ X0)))) \quad (9)$$

Assume the following.

$$\forall X0.(m1_subset_1 \ X0 \ k4_ordinal1) \Rightarrow (v7_ordinal1 \ X0) \quad (10)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0 \ X0) \wedge (m2_subset_1 \ X0 \ k1_numbers \ k5_numbers)) \Rightarrow \\ & (\forall X1.((\neg v1_xboole_0 \ X1) \wedge (m2_subset_1 \ X1 \ k1_numbers \ k5_numbers)) \Rightarrow \\ & (\forall X2.(m1_subset_1 \ X2 \ k1_numbers) \Rightarrow (\forall X3.((v1_funct_1 \\ & X3) \wedge (m1_subset_1 \ X3 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k1_numbers \ (u1_struct_0 \\ & (k4_real_ns1 \ X0)))))) \Rightarrow ((r1_ndiff_3 \ (k4_real_ns1 \ X0) \ X3 \ X2) \Rightarrow (\\ & \forall X4.((v1_funct_1 \ X4) \wedge (m1_subset_1 \ X4 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \\ & (u1_struct_0 \ (k4_real_ns1 \ X0)) \ (u1_struct_0 \ (k4_real_ns1 \ X1)))))) \Rightarrow \\ & ((r1_ndiff_1 \ (k4_real_ns1 \ X0) \ (k4_real_ns1 \ X1) \ X4 \ (k7_partfun1 \\ & (u1_struct_0 \ (k4_real_ns1 \ X0)) \ X3 \ X2)) \Rightarrow ((r1_ndiff_3 \ (k4_real_ns1 \\ & X1) \ (k1_partfun1 \ k1_numbers \ (u1_struct_0 \ (k4_real_ns1 \ X0)) \ (u1_struct_0 \\ & (k4_real_ns1 \ X0)) \ (u1_struct_0 \ (k4_real_ns1 \ X1)) \ X3 \ X4) \ X2) \wedge (k1_ndiff_3 \\ & (k4_real_ns1 \ X1) \ (k1_partfun1 \ k1_numbers \ (u1_struct_0 \ (k4_real_ns1 \\ & X0)) \ (u1_struct_0 \ (k4_real_ns1 \ X0)) \ (u1_struct_0 \ (k4_real_ns1 \\ & X1)) \ X3 \ X4) \ X2 = k17_lopban_1 \ (k4_real_ns1 \ X0) \ (k4_real_ns1 \ X1) \ (\\ & k3_ndiff_1 \ (k4_real_ns1 \ X0) \ (k4_real_ns1 \ X1) \ X4 \ (k7_partfun1 \ (\\ & u1_struct_0 \ (k4_real_ns1 \ X0)) \ X3 \ X2)) \ (k1_ndiff_3 \ (k4_real_ns1 \\ & X0) \ X3 \ X2))))))))) \end{aligned}$$