

t63_topreal9
(TMJ2iDrs6ov4viiqkWCyW3RABj2yXVppstr4)

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Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k15_euclid : \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ 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 $k3_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k19_euclid : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_jgraph_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_jgraph_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_topreal9 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_topreal9 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_real_1 : \iota \Rightarrow \iota$ be given. Let $k8_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k23_rvsum_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_square_1 : \iota \Rightarrow \iota$ be given. Let $k2_quin_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k18_rvsum_1 : \iota \Rightarrow \iota$ be given. Let $k11_euclid : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_euclid : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_square_1 : \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k14_euclid : \iota \Rightarrow \iota$ be given. Let $k11_metric_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_metric_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k2_topreal9 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k4_ordinal1 : \iota$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (u1_struct_0 (k15_euclid X0) = u1_struct_0 (k14_euclid X0)) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xreal_0 X2) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 (k14_euclid \\ & np_2)))) \Rightarrow ((X3 = k19_euclid X0 X1) \Rightarrow (k11_metric_1 (k14_euclid np_2) \\ & X3 X2 = k5_jgraph_6 X0 X1 X2)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\
& (v1_xreal_0 X2) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 (k14_euclid \\
& np_2))) \Rightarrow ((X3 = k19_euclid X0 X1) \Rightarrow (k10_metric_1 (k14_euclid np_2) \\
& X3 X2 = k7_jgraph_6 X0 X1 X2))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(v1_xreal_0 \\
& X1) \Rightarrow (\forall X2.(v1_xreal_0 X2) \Rightarrow (\forall X3.(m1_subset_1 X3 \\
& (u1_struct_0 (k15_euclid X0))) \Rightarrow (\forall X4.(m1_subset_1 X4 (\\
& u1_struct_0 (k15_euclid X0))) \Rightarrow (\forall X5.(m1_subset_1 X5 (u1_struct_0 \\
& (k15_euclid X0))) \Rightarrow (\forall X6.(m2_finseq_2 X6 k1_numbers (k1_euclid \\
& X0)) \Rightarrow (\forall X7.(m2_finseq_2 X7 k1_numbers (k1_euclid X0)) \Rightarrow \\
& (\forall X8.(m2_finseq_2 X8 k1_numbers (k1_euclid X0)) \Rightarrow (\neg(X6 = \\
& k3_rlvect_1 (k15_euclid X0) (k1_rlvect_1 (k15_euclid X0) X3 (k10_real_1 \\
& np_1 np_2)) (k1_rlvect_1 (k15_euclid X0) X4 (k10_real_1 np_1 \\
& np_2))) \wedge ((X7 = X4) \wedge ((X8 = X5) \wedge ((X3 \neq X4) \wedge ((X3 \in k3_topreal9 X0 X5 \\
& X1) \wedge ((X4 \in k2_topreal9 X0 X5 X1) \wedge (\forall X9.(m1_subset_1 X9 (u1_struct_0 \\
& (k15_euclid X0))) \Rightarrow (\neg(X9 \neq X3) \wedge ((k2_tarski X3 X9 = k9_subset_1 (\\
& u1_struct_0 (k15_euclid X0)) (k4_topreal9 X0 X3 X4) (k3_topreal9 \\
& X0 X5 X1)) \wedge (((X4 \in k3_topreal9 X0 X5 X1) \Rightarrow (X9 = X4)) \wedge ((X2 = k10_real_1 \\
& (k7_real_1 (k1_real_1 (k8_real_1 np_2 (k23_rvsum_1 (k5_algstr_0 \\
& (k15_euclid X0) X4 (k3_rlvect_1 (k15_euclid X0) (k1_rlvect_1 (\\
& k15_euclid X0) X3 (k10_real_1 np_1 np_2)) (k1_rlvect_1 (k15_euclid \\
& X0) X4 (k10_real_1 np_1 np_2)))))) (k5_algstr_0 (k15_euclid X0) \\
& (k3_rlvect_1 (k15_euclid X0) (k1_rlvect_1 (k15_euclid X0) X3 (\\
& k10_real_1 np_1 np_2)) (k1_rlvect_1 (k15_euclid X0) X4 (k10_real_1 \\
& np_1 np_2))) X5)))) (k7_square_1 (k2_quin_1 (k18_rvsum_1 (k11_euclid \\
& X0 (k8_euclid X0 X7 X6))) (k8_real_1 np_2 (k23_rvsum_1 (k5_algstr_0 \\
& (k15_euclid X0) X4 (k3_rlvect_1 (k15_euclid X0) (k1_rlvect_1 (\\
& k15_euclid X0) X3 (k10_real_1 np_1 np_2)) (k1_rlvect_1 (k15_euclid \\
& X0) X4 (k10_real_1 np_1 np_2)))))) (k5_algstr_0 (k15_euclid X0) \\
& (k3_rlvect_1 (k15_euclid X0) (k1_rlvect_1 (k15_euclid X0) X3 (\\
& k10_real_1 np_1 np_2)) (k1_rlvect_1 (k15_euclid X0) X4 (k10_real_1 \\
& np_1 np_2))) X5)))) (k9_real_1 (k18_rvsum_1 (k11_euclid X0 (k8_euclid \\
& X0 X6 X8))) (k3_square_1 X1)))) (k8_real_1 np_2 (k18_rvsum_1 \\
& (k11_euclid X0 (k8_euclid X0 X7 X6)))))) \Rightarrow ((X4 \in k3_topreal9 X0 X5 \\
& X1) \vee (X9 = k3_rlvect_1 (k15_euclid X0) (k1_rlvect_1 (k15_euclid \\
& X0) (k3_rlvect_1 (k15_euclid X0) (k1_rlvect_1 (k15_euclid X0) \\
& X3 (k10_real_1 np_1 np_2)) (k1_rlvect_1 (k15_euclid X0) X4 (k10_real_1 \\
& np_1 np_2))) (k9_real_1 np_1 X2)) (k1_rlvect_1 (k15_euclid \\
& X0) X4 X2))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(v1_xreal_0 \\ & X1) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k15_euclid X0))) \Rightarrow \\ & (\forall X3.(m1_subset_1 X3 (u1_struct_0 (k14_euclid X0))) \Rightarrow (\\ & (X2 = X3) \Rightarrow (k11_metric_1 (k14_euclid X0) X3 X1 = k3_topreal9 X0 X2 \\ & X1)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(v1_xreal_0 \\ & X1) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k15_euclid X0))) \Rightarrow \\ & (\forall X3.(m1_subset_1 X3 (u1_struct_0 (k14_euclid X0))) \Rightarrow (\\ & (X2 = X3) \Rightarrow (k10_metric_1 (k14_euclid X0) X3 X1 = k2_topreal9 X0 X2 \\ & X1)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_2) \wedge (m2_subset_1 np_2 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_2 k5_numbers) \wedge (m1_subset_1 np_2 k1_numbers)) \end{aligned} \quad (7)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (8)$$

Assume the following.

$$v6_membered k4_ordinal1 \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0) \wedge (v1_xreal_0 X1)) \Rightarrow (m1_subset_1 (k19_euclid X0 X1) (u1_struct_0 (k15_euclid np_2))) \quad (10)$$

Assume the following.

$$\forall X0.(v6_membered X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow (v7_ordinal1 X1)) \quad (11)$$

Theorem 1

$$\begin{aligned}
& \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\
& (v1_xreal_0 X2) \Rightarrow (\forall X3.(v1_xreal_0 X3) \Rightarrow (\forall X4.(m1_subset_1 \\
& X4 (u1_struct_0 (k15_euclid np_2))) \Rightarrow (\forall X5.(m1_subset_1 \\
& X5 (u1_struct_0 (k15_euclid np_2))) \Rightarrow (\forall X6.(m2_finseq_2 \\
& X6 k1_numbers (k1_euclid np_2)) \Rightarrow (\forall X7.(m2_finseq_2 X7 \\
& k1_numbers (k1_euclid np_2)) \Rightarrow (\forall X8.(m2_finseq_2 X8 k1_numbers \\
& (k1_euclid np_2)) \Rightarrow (\neg(X6 = k3_rlvect_1 (k15_euclid np_2) (k1_rlvect_1 \\
& (k15_euclid np_2) X4 (k10_real_1 np_1 np_2)) (k1_rlvect_1 (\\
& k15_euclid np_2) X5 (k10_real_1 np_1 np_2)))) \wedge ((X7 = X5) \wedge ((X8 = \\
& k19_euclid X0 X1) \wedge ((X4 \neq X5) \wedge ((X4 \in k5_jgraph_6 X0 X1 X2) \wedge ((X5 \in k7_jgraph_6 \\
& X0 X1 X2) \wedge (\forall X9.(m1_subset_1 X9 (u1_struct_0 (k15_euclid \\
& np_2)))) \Rightarrow (\neg(X9 \neq X4) \wedge ((k2_tarski X4 X9 = k9_subset_1 (u1_struct_0 \\
& (k15_euclid np_2)) (k4_topreal9 np_2 X4 X5) (k5_jgraph_6 X0 X1 \\
& X2)) \wedge (((X5 \in k3_topreal9 np_2 (k19_euclid X0 X1) X2) \Rightarrow (X9 = X5))) \wedge \\
& ((X3 = k10_real_1 (k7_real_1 (k1_real_1 (k8_real_1 np_2 (k23_rvsum_1 \\
& (k5_algstr_0 (k15_euclid np_2) X5 (k3_rlvect_1 (k15_euclid np_2) \\
& (k1_rlvect_1 (k15_euclid np_2) X4 (k10_real_1 np_1 np_2)) (\\
& k1_rlvect_1 (k15_euclid np_2) X5 (k10_real_1 np_1 np_2)))))) \\
& (k5_algstr_0 (k15_euclid np_2) (k3_rlvect_1 (k15_euclid np_2) \\
& (k1_rlvect_1 (k15_euclid np_2) X4 (k10_real_1 np_1 np_2)) (\\
& k1_rlvect_1 (k15_euclid np_2) X5 (k10_real_1 np_1 np_2)))) (\\
& k19_euclid X0 X1)))))) (k7_square_1 (k2_quin_1 (k18_rvsum_1 (k11_euclid \\
& np_2 (k8_euclid np_2 X7 X6))) (k8_real_1 np_2 (k23_rvsum_1 (\\
& k5_algstr_0 (k15_euclid np_2) X5 (k3_rlvect_1 (k15_euclid np_2) \\
& (k1_rlvect_1 (k15_euclid np_2) X4 (k10_real_1 np_1 np_2)) (\\
& k1_rlvect_1 (k15_euclid np_2) X5 (k10_real_1 np_1 np_2)))))) \\
& (k5_algstr_0 (k15_euclid np_2) (k3_rlvect_1 (k15_euclid np_2) \\
& (k1_rlvect_1 (k15_euclid np_2) X4 (k10_real_1 np_1 np_2)) (\\
& k1_rlvect_1 (k15_euclid np_2) X5 (k10_real_1 np_1 np_2)))) (\\
& k19_euclid X0 X1)))))) (k9_real_1 (k18_rvsum_1 (k11_euclid np_2 \\
& (k8_euclid np_2 X6 X8))) (k3_square_1 X2)))))) (k8_real_1 np_2 \\
& (k18_rvsum_1 (k11_euclid np_2 (k8_euclid np_2 X7 X6)))))) \Rightarrow ((\\
& X5 \in k3_topreal9 np_2 (k19_euclid X0 X1) X2) \vee (X9 = k3_rlvect_1 (\\
& k15_euclid np_2) (k1_rlvect_1 (k15_euclid np_2) (k3_rlvect_1 \\
& (k15_euclid np_2) (k1_rlvect_1 (k15_euclid np_2) X4 (k10_real_1 \\
& np_1 np_2)) (k1_rlvect_1 (k15_euclid np_2) X5 (k10_real_1 np_1 \\
& np_2))) (k9_real_1 np_1 X3)) (k1_rlvect_1 (k15_euclid np_2) \\
& X5 X3)))))))))
\end{aligned}$$