

t11_jgraph_7
(TML56FBpLAtUmSjtZgMvm9xpUBtvmgRV1cj)

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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 $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k17_euclid : \iota \Rightarrow \iota$ be given. Let $k18_euclid : \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_jordan6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_sppol_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_rltopsp1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k19_euclid : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k18_pscomp_1 : \iota \Rightarrow \iota$ be given. Let $k22_pscomp_1 : \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ 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 $v5_rltopsp1 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_rltopsp1 : \iota \Rightarrow o$ be given. Let $l1_rlvect_1 : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\
& (v1_xreal_0 X2) \Rightarrow (\forall X3.(v1_xreal_0 X3) \Rightarrow (\forall X4.(m1_subset_1 \\
& X4 (u1_struct_0 (k15_euclid np_2))) \Rightarrow (\forall X5.(m1_subset_1 \\
& X5 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow ((X4 \in k1_rltopsp1 (k15_euclid \\
& np_2) (k19_euclid X1 X3) (k19_euclid X1 X2)) \Rightarrow ((r1_xxreal_0 X1 \\
& X0) \vee ((r1_xxreal_0 X3 X2) \vee ((r1_jordan6 (k1_sppol_2 X0 X1 X2 X3) \\
& X4 X5) \Leftrightarrow (((X5 \in k1_rltopsp1 (k15_euclid np_2) (k19_euclid X1 X3) \\
& (k19_euclid X1 X2)) \wedge (r1_xxreal_0 (k18_euclid X5) (k18_euclid \\
& X4))) \vee ((X5 \in k1_rltopsp1 (k15_euclid np_2) (k19_euclid X1 X2) \\
& (k19_euclid X0 X2)) \wedge (X5 \neq k18_pscomp_1 (k1_sppol_2 X0 X1 X2 X3))))))))))))) \\
& \tag{1}
\end{aligned}$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow ((k17_euclid (k19_euclid X0 X1) = X0) \wedge (k18_euclid (k19_euclid X0 X1) = X1))) \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\ (v1_xreal_0 X2) \Rightarrow (\forall X3.(v1_xreal_0 X3) \Rightarrow (((r1_xxreal_0 \\ X0 X1) \wedge (r1_xxreal_0 X2 X3)) \Rightarrow ((k18_pscomp_1 (k1_sppol_2 X0 X1 X2 \\ X3) = k19_euclid X0 X2) \wedge (k22_pscomp_1 (k1_sppol_2 X0 X1 X2 X3) = k19_euclid \\ X1 X3)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\ (v1_xreal_0 X2) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 (k15_euclid \\ np_2))) \Rightarrow (((k17_euclid X3 = X0) \wedge ((r1_xxreal_0 X1 (k18_euclid \\ X3)) \wedge (r1_xxreal_0 (k18_euclid X3) X2))) \Rightarrow ((r1_xxreal_0 X2 X1) \vee \\ (X3 \in k1_rltopsp1 (k15_euclid np_2) (k19_euclid X0 X1) (k19_euclid \\ X0 X2)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\ (v1_xreal_0 X2) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 (k15_euclid \\ np_2))) \Rightarrow (((k18_euclid X3 = X2) \wedge ((r1_xxreal_0 X0 (k17_euclid \\ X3)) \wedge (r1_xxreal_0 (k17_euclid X3) X1))) \Rightarrow ((r1_xxreal_0 X1 X0) \vee \\ (X3 \in k1_rltopsp1 (k15_euclid np_2) (k19_euclid X0 X2) (k19_euclid \\ X1 X2)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} ((v2_xxreal_0 np_2) \wedge (m2_subset_1 np_2 k1_numbers k5_numbers)) \wedge \\ ((m1_subset_1 np_2 k5_numbers) \wedge (m1_subset_1 np_2 k1_numbers)) \end{aligned} \quad (6)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (7)$$

Assume the following.

$$v6_membered k4_ordinal1 \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 X0) \Rightarrow ((v2_pre_topc (k15_euclid X0)) \wedge \\ ((v13_algstr_0 (k15_euclid X0)) \wedge ((v2_rlvect_1 (k15_euclid X0)) \wedge \\ ((v3_rlvect_1 (k15_euclid X0)) \wedge ((v4_rlvect_1 (k15_euclid X0)) \wedge \\ ((v5_rlvect_1 (k15_euclid X0)) \wedge ((v6_rlvect_1 (k15_euclid X0)) \wedge \\ ((v7_rlvect_1 (k15_euclid X0)) \wedge ((v8_rlvect_1 (k15_euclid X0)) \wedge \\ (v5_rltopsp1 (k15_euclid X0)))))))))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow ((\neg v2_struct_0 (k15_euclid X0)) \wedge \\ (v5_rltopsp1 (k15_euclid X0))) \quad (10)$$

Assume the following.

$$\forall X0.(l1_rltopsp1 X0) \Rightarrow ((l1_rlvect_1 X0) \wedge (l1_pre_topc X0)) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0) \wedge (v1_xreal_0 X1)) \Rightarrow (m1_subset_1 (k19_euclid X0 X1) (u1_struct_0 (k15_euclid np_2))) \quad (12)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow (m1_subset_1 (k17_euclid X0) k1_numbers) \quad (13)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow ((v5_rltopsp1 (k15_euclid X0)) \wedge (l1_rltopsp1 (k15_euclid X0))) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow ((r1_xxreal_0 X0 X1) \vee (r1_xxreal_0 X1 X0)) \quad (15)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 \\ X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge \\ ((v5_rlvect_1 X0) \wedge ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 \\ X0) \wedge (l1_rlvect_1 X0)))))))))) \wedge ((m1_subset_1 X1 (u1_struct_0 \\ X0)) \wedge (m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow (k1_rltopsp1 X0 X1 X2 = \\ k1_rltopsp1 X0 X2 X1) \end{aligned} \quad (16)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xxreal_0 X0) \quad (17)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (18)$$

Assume the following.

$$\forall X0.(v6_membered X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow (v7_ordinal1 X1)) \quad (19)$$

Theorem 1

$$\begin{aligned} \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ (\forall X2.(v1_xreal_0 X2) \Rightarrow (\forall X3.(v1_xreal_0 X3) \Rightarrow (\forall X4. \\ (v1_xreal_0 X4) \Rightarrow (\forall X5.(v1_xreal_0 X5) \Rightarrow (((k17_euclid X0 = \\ X3) \wedge ((k18_euclid X1 = X4) \wedge ((r1_xxreal_0 X4 (k18_euclid X0)) \wedge \\ (r1_xxreal_0 (k18_euclid X0) X5) \wedge (r1_xxreal_0 (k17_euclid X1) \\ X3)))))) \Rightarrow ((r1_xxreal_0 X3 X2) \vee ((r1_xxreal_0 X5 X4) \vee ((r1_xxreal_0 \\ (k17_euclid X1) X2) \vee (r1_jordan6 (k1_sppol_2 X2 X3 X4 X5) X0 X1)))))))))) \end{aligned}$$