

t24_euclid_9 (TMNTUjyujuYT- ntKbh4T5vyMbyWWNMrZMw1m)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k3_pcomps_1 : \iota \Rightarrow \iota$ be given. Let $k14_euclid : \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_euclid_9 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_metric_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v6_metric_1 : \iota \Rightarrow o$ be given. Let $v7_metric_1 : \iota \Rightarrow o$ be given. Let $v8_metric_1 : \iota \Rightarrow o$ be given. Let $v9_metric_1 : \iota \Rightarrow o$ be given. Let $l1_metric_1 : \iota \Rightarrow o$ be given. Let $v1_metric_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 (k14_euclid X0))) \Rightarrow (r1_tarski (k9_metric_1 \\ & (k14_euclid X0) X2 X1) (k4_euclid_9 X0 X2 X1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((r1_tarski X0 X1) \wedge (r1_tarski X1 X2)) \Rightarrow (r1_tarski X0 X2) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v6_metric_1 X0) \wedge ((v7_metric_1 \\ & X0) \wedge ((v8_metric_1 X0) \wedge ((v9_metric_1 X0) \wedge (l1_metric_1 X0)))))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 (k3_pcomps_1 \\ & X0)))) \Rightarrow ((v3_pre_topc X1 (k3_pcomps_1 X0)) \Leftrightarrow (\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X0)) \Rightarrow (\neg (X2 \in X1) \wedge (\forall X3.(v1_xreal_0 X3) \Rightarrow \\ & (\neg (\neg r1_xxreal_0 X3 k6_numbers) \wedge (r1_tarski (k9_metric_1 X0 X2 \\ & X3) X1))))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow ((\neg v2_struct_0 (k14_euclid X0)) \wedge \\ & ((v1_metric_1 (k14_euclid X0)) \wedge ((v6_metric_1 (k14_euclid X0)) \wedge \\ & ((v7_metric_1 (k14_euclid X0)) \wedge ((v8_metric_1 (k14_euclid X0)) \wedge \\ & (v9_metric_1 (k14_euclid X0)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1\ X0) \Rightarrow & ((v1_metric_1\ (k14_euclid\ X0)) \wedge \\ & ((v6_metric_1\ (k14_euclid\ X0)) \wedge ((v7_metric_1\ (k14_euclid\ X0)) \wedge \\ & ((v8_metric_1\ (k14_euclid\ X0)) \wedge ((v9_metric_1\ (k14_euclid\ X0)) \wedge \\ & (l1_metric_1\ (k14_euclid\ X0)))))) \end{aligned} \quad (5)$$

Theorem 1

$$\begin{aligned} \forall X0.(v7_ordinal1\ X0) \Rightarrow & (\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1 \\ & (u1_struct_0\ (k3_pcomps_1\ (k14_euclid\ X0)))))) \Rightarrow ((\forall X2. \\ & (m1_subset_1\ X2\ (u1_struct_0\ (k14_euclid\ X0))) \Rightarrow (\neg(X2 \in X1) \wedge (\forall X3. \\ & (v1_xreal_0\ X3) \Rightarrow (\neg(\neg r1_xxreal_0\ X3\ k6_numbers) \wedge (r1_tarski\ (\\ & k4_euclid_9\ X0\ X2\ X3\ X1)))))) \Rightarrow (v3_pre_topc\ X1\ (k3_pcomps_1\ (k14_euclid \\ & X0)))) \end{aligned}$$