

t3_kurato_2 (TMLyrTyLNpqYSpy- iZGVKVtrQiD8b8WFqdVY)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k14_euclid : \iota \Rightarrow \iota$ be given. Let $k15_euclid : \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k12_euclid : \iota \Rightarrow \iota$ be given. Let $k5_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_metric_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_topreal9 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(v1_xreal_0 \\ & X1) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k15_euclid X0))) \Rightarrow \\ & (\forall X3.(m1_subset_1 X3 (u1_struct_0 (k15_euclid X0))) \Rightarrow (\\ & (X2 \in k1_topreal9 X0 X3 X1) \Leftrightarrow (\neg r1_xxreal_0 X1 (k12_euclid (k5_algstr_0 \\ & (k15_euclid X0) X2 X3)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(v1_xreal_0 \\ & X1) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k15_euclid X0))) \Rightarrow \\ & (\forall X3.(m1_subset_1 X3 (u1_struct_0 (k14_euclid X0))) \Rightarrow (\\ & (X2 = X3) \Rightarrow (k9_metric_1 (k14_euclid X0) X3 X1 = k1_topreal9 X0 X2 X1)))) \end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 (u1_struct_0 (k14_euclid X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 \\ & (u1_struct_0 (k15_euclid X0))) \Rightarrow (\forall X3.(m1_subset_1 X3 (\\ & u1_struct_0 (k15_euclid X0))) \Rightarrow (\forall X4.(v1_xreal_0 X4) \Rightarrow (\\ & (X1 = X3) \Rightarrow ((r1_xxreal_0 X4 (k12_euclid (k5_algstr_0 (k15_euclid \\ & X0) X2 X3))) \vee (X2 \in k9_metric_1 (k14_euclid X0) X1 X4)))))) \end{aligned}$$