

t29_topreal9 (TMMYzoKx- uQkGxsM8oPFDKpLsJPzzmZoaTBZ)

October 27, 2020

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 $k15_euclid : \iota \Rightarrow \iota$ be given. Let $k4_topreal9 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ 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 $k9_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(v1_xreal_0 \\
 & X1) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k15_euclid X0))) \Rightarrow \\
 & (\forall X3.(m1_subset_1 X3 (u1_struct_0 (k15_euclid X0))) \Rightarrow (\\
 & \forall X4.(X4 = k3_rlvect_1 (k15_euclid X0) (k1_rlvect_1 (k15_euclid \\
 & X0) X2 (k9_real_1 np_1 X1)) (k1_rlvect_1 (k15_euclid X0) X3 X1)) \Rightarrow \\
 & ((\neg(X4 = X2) \wedge ((X1 \neq k6_numbers) \wedge (X2 \neq X3))) \wedge (((X1 = k6_numbers) \vee \\
 & (X2 = X3)) \Rightarrow (X4 = X2)) \wedge ((\neg(X4 = X3) \wedge ((X1 \neq np_1) \wedge (X2 \neq X3))) \wedge (((X1 = \\
 & np_1) \vee (X2 = X3)) \Rightarrow (X4 = X3)))))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\
 & X1 (u1_struct_0 (k15_euclid X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 \\
 & (u1_struct_0 (k15_euclid X0))) \Rightarrow (X1 \in k4_topreal9 X0 X1 X2)))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\
 & X1 (u1_struct_0 (k15_euclid X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 \\
 & (u1_struct_0 (k15_euclid X0))) \Rightarrow (\forall X3.(X3 \in k4_topreal9 \\
 & X0 X1 X2) \Leftrightarrow (\exists X4.(v1_xreal_0 X4) \wedge ((X3 = k3_rlvect_1 (k15_euclid \\
 & X0) (k1_rlvect_1 (k15_euclid X0) X1 (k9_real_1 np_1 X4)) (k1_rlvect_1 \\
 & (k15_euclid X0) X2 X4)) \wedge (r1_xxreal_0 k6_numbers X4))))))
 \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.\forall X1.(X1 = k1_tarski X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow \\
 & (X2 = X0))
 \end{aligned} \tag{4}$$

Theorem 1

$$\forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid X0))) \Rightarrow (k4_topreal9 X0 X1 X1 = k1_tarSKI X1))$$