

t15_euclid_5

(TMP6p2YGj3TfDnN9jvxLWXE9TKWDakwcq8n)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_euclid_5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_euclid_5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_euclid_5 : \iota \Rightarrow \iota$ be given. Let $k2_euclid_5 : \iota \Rightarrow \iota$ be given. Let $k3_euclid_5 : \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k15_euclid : \iota \Rightarrow \iota$ be given. Let $np_3 : \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k1_numbers) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_numbers) \Rightarrow ((k1_euclid_5 \\ & (k4_euclid_5 X0 X1 X2) = X0) \wedge ((k2_euclid_5 (k4_euclid_5 X0 X1 X2) = \\ & X1) \wedge (k3_euclid_5 (k4_euclid_5 X0 X1 X2) = X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v1_xreal_0 X0) \wedge ((v1_xreal_0 \\ & X1) \wedge (v1_xreal_0 X2))) \Rightarrow (m1_subset_1 (k4_euclid_5 X0 X1 X2) (u1_struct_0 \\ & (k15_euclid np_3))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_3))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_3))) \Rightarrow \\ & (k5_euclid_5 X0 X1 = k4_euclid_5 (k9_real_1 (k8_real_1 (k2_euclid_5 \\ & X0) (k3_euclid_5 X1)) (k8_real_1 (k3_euclid_5 X0) (k2_euclid_5 \\ & X1))) (k9_real_1 (k8_real_1 (k3_euclid_5 X0) (k1_euclid_5 X1)) \\ & (k8_real_1 (k1_euclid_5 X0) (k3_euclid_5 X1))) (k9_real_1 (k8_real_1 \\ & (k1_euclid_5 X0) (k2_euclid_5 X1)) (k8_real_1 (k2_euclid_5 X0) \\ & (k1_euclid_5 X1)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (4)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k1_numbers) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_numbers) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 k1_numbers) \Rightarrow (\forall X4.(m1_subset_1 X4 k1_numbers) \Rightarrow \\ & (\forall X5.(m1_subset_1 X5 k1_numbers) \Rightarrow (k5_euclid_5 (k4_euclid_5 \\ & X0 X1 X2) (k4_euclid_5 X3 X4 X5) = k4_euclid_5 (k9_real_1 (k8_real_1 \\ & X1 X5) (k8_real_1 X2 X4)) (k9_real_1 (k8_real_1 X2 X3) (k8_real_1 \\ & X0 X5)) (k9_real_1 (k8_real_1 X0 X4) (k8_real_1 X1 X3)))))))))) \end{aligned}$$