

t59_euclid_8

(TMFy7XSdMmA85fAkT2y3XQ6EL7k3Rf8yhCX)

October 27, 2020

Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k9_euclid : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_3 : \iota$ be given. Let $k1_euclid_8 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. (m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1. (m1_subset_1 \\ X1 k1_numbers) \Rightarrow (\forall X2. (m1_subset_1 X2 k1_numbers) \Rightarrow (\forall X3. \\ (m1_subset_1 X3 k1_numbers) \Rightarrow (k9_euclid np_3 (k1_euclid_8 X1 \\ X2 X3) X0 = k1_euclid_8 (k11_binop_2 X0 X1) (k11_binop_2 X0 X2) (k11_binop_2 \\ X0 X3)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. (v1_xreal_0 X0) \Leftrightarrow (X0 \in k1_numbers) \quad (3)$$

Theorem 1

$$\begin{aligned} \forall X0. (m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1. (m1_subset_1 \\ X1 k1_numbers) \Rightarrow (\forall X2. (m1_subset_1 X2 k1_numbers) \Rightarrow (\forall X3. \\ (v1_xreal_0 X3) \Rightarrow (k9_euclid np_3 (k1_euclid_8 X0 X1 X2) X3 = k1_euclid_8 \\ (k11_binop_2 X3 X0) (k11_binop_2 X3 X1) (k11_binop_2 X3 X2)))))) \end{aligned}$$