

t45_euclid_8

(TMK9snwcmgbCng2VLoA25a17XNp5bCWep7f)

October 27, 2020

Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k7_euclid : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_3 : \iota$ be given. Let $k1_euclid_8 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_euclid : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_euclid_8 : \iota$ be given. Let $k9_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_euclid_8 : \iota$ be given. Let $k4_euclid_8 : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k1_numbers) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_numbers) \Rightarrow (k1_euclid_8 \\ & X0 X1 X2 = k7_euclid np_3 (k7_euclid np_3 (k9_euclid np_3 k2_euclid_8 \\ & X0) (k9_euclid np_3 k3_euclid_8 X1)) (k9_euclid np_3 k4_euclid_8 \\ & X2)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k1_numbers) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_numbers) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 k1_numbers) \Rightarrow (\forall X4.(m1_subset_1 X4 k1_numbers) \Rightarrow \\ & (\forall X5.(m1_subset_1 X5 k1_numbers) \Rightarrow (k7_euclid np_3 (k1_euclid_8 \\ & X0 X1 X2) (k1_euclid_8 X3 X4 X5) = k1_euclid_8 (k9_binop_2 X0 X3) (\\ & k9_binop_2 X1 X4) (k9_binop_2 X2 X5)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xreal_0 X0) \wedge (v1_xreal_0 X1)) \Rightarrow (m1_subset_1 (k9_binop_2 X0 X1) k1_numbers) \tag{3}$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \tag{4}$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k1_numbers) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_numbers) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 k1_numbers) \Rightarrow (\forall X4.(m1_subset_1 X4 k1_numbers) \Rightarrow \\ & (\forall X5.(m1_subset_1 X5 k1_numbers) \Rightarrow (k7_euclid_np_3 (k1_euclid_8 \\ & X0 X1 X2) (k1_euclid_8 X3 X4 X5) = k7_euclid_np_3 (k7_euclid_np_3 \\ & (k9_euclid_np_3 k2_euclid_8 (k9_binop_2 X0 X3)) (k9_euclid_np_3 \\ & k3_euclid_8 (k9_binop_2 X1 X4)) (k9_euclid_np_3 k4_euclid_8 \\ & (k9_binop_2 X2 X5)))))))))) \end{aligned}$$