

t87_euclid_8

(TMJTAf7MdrGidE6PWPdW17PEC89GHUxdp7T)

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Let $m2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k1_euclid : \iota \Rightarrow \iota$ be given. Let $np_3 : \iota$ be given. Let $k5_euclid_8 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_euclid : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k6_euclid : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_euclid : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_euclid : \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k9_euclid : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v2_xreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $k4_euclid_8 : \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m2_finseq_2 \\ & X1 k1_numbers (k1_euclid X0)) \Rightarrow (\forall X2.(m2_finseq_2 X2 k1_numbers \\ & (k1_euclid X0)) \Rightarrow (\forall X3.(m2_finseq_2 X3 k1_numbers (k1_euclid \\ & X0)) \Rightarrow (k6_euclid X0 (k7_euclid X0 (k7_euclid X0 X1 X2) X3) = k7_euclid \\ & X0 (k7_euclid X0 (k6_euclid X0 X1) (k6_euclid X0 X2)) (k6_euclid \\ & X0 X3)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m2_finseq_2 X0 k1_numbers (k1_euclid np_3)) \Rightarrow (\forall X1. \\ & (m2_finseq_2 X1 k1_numbers (k1_euclid np_3)) \Rightarrow (\forall X2.(m2_finseq_2 \\ & X2 k1_numbers (k1_euclid np_3)) \Rightarrow (k5_euclid_8 X0 (k7_euclid np_3 \\ & X1 X2) = k7_euclid np_3 (k5_euclid_8 X0 X1) (k5_euclid_8 X0 X2)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m2_finseq_2 X0 k1_numbers (k1_euclid np_3)) \Rightarrow (\forall X1. \\ & (m2_finseq_2 X1 k1_numbers (k1_euclid np_3)) \Rightarrow (k5_euclid_8 X0 \\ & X1 = k6_euclid np_3 (k5_euclid_8 X1 X0))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m2_finseq_2 \\ & X1 k1_numbers (k1_euclid X0)) \Rightarrow (\forall X2.(m2_finseq_2 X2 k1_numbers \\ & (k1_euclid X0)) \Rightarrow (\forall X3.(m2_finseq_2 X3 k1_numbers (k1_euclid \\ & X0)) \Rightarrow ((X1 = k7_euclid X0 X2 X3) \Leftrightarrow (X2 = k8_euclid X0 X1 X3)))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m2_finseq_2 \\ & X1 k1_numbers (k1_euclid X0)) \Rightarrow ((k8_euclid X0 X1 X1 = k5_euclid X0) \wedge \\ & (k7_euclid X0 X1 (k6_euclid X0 X1) = k5_euclid X0))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(m2_finseq_2 X1 k1_numbers \\ & (k1_euclid X0)) \Rightarrow ((k7_euclid X0 (k9_euclid X0 X1 k6_numbers) X1 = \\ & X1) \wedge (k7_euclid X0 X1 (k5_euclid X0) = X1))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & ((v2_xreal_0 np_3) \wedge (m2_subset_1 np_3 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_3 k5_numbers) \wedge (m1_subset_1 np_3 k1_numbers)) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(m1_finseq_2 X1 X0) \Rightarrow (\forall X2.(m2_finseq_2 \\ & X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \quad (8)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (9)$$

Assume the following.

$$v6_membered k4_ordinal1 \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v7_ordinal1 X0) \wedge ((m1_subset_1 \\ & X1 (k1_euclid X0)) \wedge (m1_subset_1 X2 (k1_euclid X0)))) \Rightarrow (m2_finseq_2 \\ & (k7_euclid X0 X1 X2) k1_numbers (k1_euclid X0)) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((m1_subset_1 X0 (k1_euclid np_3)) \wedge (m1_subset_1 \\ & X1 (k1_euclid np_3))) \Rightarrow (m2_finseq_2 (k5_euclid_8 X0 X1) k1_numbers \\ & (k1_euclid np_3)) \end{aligned} \quad (12)$$

Assume the following.

$$m2_finseq_2 \ k4_euclid_8 \ k1_numbers \ (k1_euclid \ np_3) \quad (13)$$

Assume the following.

$$\forall X0.(v7_ordinal1 \ X0) \Rightarrow (m1_finseq_2 \ (k1_euclid \ X0) \ k1_numbers) \quad (14)$$

Assume the following.

$$\forall X0.(v6_membered \ X0) \Rightarrow (\forall X1.(m1_subset_1 \ X1 \ X0) \Rightarrow (v7_ordinal1 \ X1)) \quad (15)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m2_finseq_2 \ X0 \ k1_numbers \ (k1_euclid \ np_3)) \Rightarrow (\forall X1. \\ & (m2_finseq_2 \ X1 \ k1_numbers \ (k1_euclid \ np_3)) \Rightarrow (\forall X2.(m2_finseq_2 \\ & \ X2 \ k1_numbers \ (k1_euclid \ np_3)) \Rightarrow (k5_euclid_8 \ (k7_euclid \ np_3 \\ & \ X0 \ X1) \ X2 = k7_euclid \ np_3 \ (k5_euclid_8 \ X0 \ X2) \ (k5_euclid_8 \ X1 \ X2)))) \end{aligned}$$