

t3_euclid_5

(TMUawXmEW31Qm3cPUnJoZj4TFGpn9KEC7Db)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ 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. Let $k4_euclid_5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k1_numbers : \iota$ be given. Let $k3_finseq_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k11_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_3))) \Rightarrow \\ & (\exists X1.(m1_subset_1 X1 k1_numbers) \wedge (\exists X2.(m1_subset_1 \\ & X2 k1_numbers) \wedge (\exists X3.(m1_subset_1 X3 k1_numbers) \wedge (X0 = \\ & k3_finseq_4 k1_numbers X1 X2 X3)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v1_xreal_0 X0) \wedge ((v1_xreal_0 \\ & X1) \wedge (v1_xreal_0 X2))) \Rightarrow (k4_euclid_5 X0 X1 X2 = k11_finseq_1 X0 X1 \\ & X2) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0) \wedge \\ & ((m1_subset_1 X1 X0) \wedge ((m1_subset_1 X2 X0) \wedge (m1_subset_1 X3 X0)))) \Rightarrow \\ & (k3_finseq_4 X0 X1 X2 X3 = k11_finseq_1 X1 X2 X3) \end{aligned} \quad (4)$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \quad (5)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid_np_3))) \Rightarrow (m1_subset_1 (k2_euclid_5 X0) k1_numbers) \quad (6)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid_np_3))) \Rightarrow (m1_subset_1 (k1_euclid_5 X0) k1_numbers) \quad (7)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (8)$$

Theorem 1

$$\forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid_np_3))) \Rightarrow (X0 = k4_euclid_5 (k1_euclid_5 X0) (k2_euclid_5 X0) (k3_euclid_5 X0))$$