

t15_euclidlp
(TMc7QikoqeTU8qFpp5hpjsA6KK1HKpU7ipF)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $m2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_euclid : \iota \Rightarrow \iota$ be given. Let $k8_euclid : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_euclid : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_euclid : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_real_1 : \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $m1_finseq_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k1_numbers) \Rightarrow (\forall X2.(v7_ordinal1 X2) \Rightarrow (\forall X3.(m2_finseq_2 \\ & X3 k1_numbers (k1_euclid X2)) \Rightarrow (k9_euclid X2 X3 (k7_real_1 X0 X1) = \\ & k7_euclid X2 (k9_euclid X2 X3 X0) (k9_euclid X2 X3 X1)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k1_numbers) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_numbers) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 k5_numbers) \Rightarrow (\forall X4.(m2_finseq_2 X4 k1_numbers \\ & (k1_euclid X3)) \Rightarrow (\forall X5.(m2_finseq_2 X5 k1_numbers (k1_euclid \\ & X3)) \Rightarrow (\forall X6.(m2_finseq_2 X6 k1_numbers (k1_euclid X3)) \Rightarrow \\ & (\forall X7.(m2_finseq_2 X7 k1_numbers (k1_euclid X3)) \Rightarrow (k8_euclid \\ & X3 X4 (k7_euclid X3 (k7_euclid X3 (k9_euclid X3 X5 X0) (k9_euclid \\ & X3 X6 X1)) (k9_euclid X3 X7 X2)) = k7_euclid X3 X4 (k7_euclid X3 (k7_euclid \\ & X3 (k9_euclid X3 X5 (k1_real_1 X0)) (k9_euclid X3 X6 (k1_real_1 X1))) \\ & (k9_euclid X3 X7 (k1_real_1 X2)))))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_2 X1 X0) \Rightarrow (\forall X2.(m2_finseq_2 X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \quad (3)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (4)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (k1_real_1 X0 = k4_xcmplx_0 X0) \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(m2_finseq_2 X1 k1_numbers \\ (k1_euclid X0) \Rightarrow (\forall X2.(m2_finseq_2 X2 k1_numbers (k1_euclid \\ X0)) \Rightarrow (\forall X3.(m2_finseq_2 X3 k1_numbers (k1_euclid X0) \Rightarrow \\ (k7_euclid X0 X1 (k7_euclid X0 X2 X3) = k7_euclid X0 (k7_euclid X0 \\ X1 X2) X3)))))) \end{aligned} \quad (6)$$

Assume the following.

$$v6_membered k4_ordinal1 \quad (7)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow ((v1_xcmplx_0 (k4_xcmplx_0 X0)) \wedge (v1_xreal_0 (k4_xcmplx_0 X0))) \quad (8)$$

Assume the following.

$$v3_membered k1_numbers \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v7_ordinal1 X0) \wedge ((m1_subset_1 X1 (k1_euclid X0)) \wedge (v1_xreal_0 X2))) \Rightarrow (m2_finseq_2 (k9_euclid X0 X1 X2) k1_numbers (k1_euclid X0)) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_numbers) \wedge (v1_xreal_0 X1)) \Rightarrow (m1_subset_1 (k7_real_1 X0 X1) k1_numbers) \quad (11)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (m1_subset_1 (k1_real_1 X0) k1_numbers) \quad (12)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (m1_finseq_2 (k1_euclid X0) k1_numbers) \quad (13)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (14)$$

Assume the following.

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

Assume the following.

$$\forall X0.(v3_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow (v1_xreal_0\ X1)) \quad (16)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1\ X0\ k1_numbers)\Rightarrow(\forall X1.(m1_subset_1 \\ & \quad X1\ k1_numbers)\Rightarrow(\forall X2.(m1_subset_1\ X2\ k1_numbers)\Rightarrow(\forall X3. \\ & (m1_subset_1\ X3\ k5_numbers)\Rightarrow(\forall X4.(m2_finseq_2\ X4\ k1_numbers \\ & \quad (k1_euclid\ X3))\Rightarrow(\forall X5.(m2_finseq_2\ X5\ k1_numbers\ (k1_euclid \\ & \quad X3))\Rightarrow(k8_euclid\ X3\ X4\ (k9_euclid\ X3\ X5\ (k7_real_1\ (k7_real_1\ X0 \\ & \quad X1)\ X2)) = k7_euclid\ X3\ (k7_euclid\ X3\ (k7_euclid\ X3\ X4\ (k9_euclid \\ & \quad X3\ X5\ (k1_real_1\ X0)))\ (k9_euclid\ X3\ X5\ (k1_real_1\ X1)))\ (k9_euclid \\ & \quad X3\ X5\ (k1_real_1\ X2))))))))) \end{aligned}$$