

t26_euclidlp

(TMGv9wJN3bEPoZgnXuH5kPkQkbDVUs3u9ax)

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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 $k7_euclid : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_euclid : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_real_1 : \iota \Rightarrow \iota$ be given. Let $k6_euclid : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m2_finseq_2 \\
 & X1 k1_numbers (k1_euclid X0)) \Rightarrow (\forall X2.(m2_finseq_2 X2 k1_numbers \\
 & (k1_euclid X0)) \Rightarrow (\forall X3.(m2_finseq_2 X3 k1_numbers (k1_euclid \\
 & X0)) \Rightarrow (\forall X4.(m2_finseq_2 X4 k1_numbers (k1_euclid X0)) \Rightarrow \\
 & (\forall X5.(m2_finseq_2 X5 k1_numbers (k1_euclid X0)) \Rightarrow (\forall X6. \\
 & (m2_finseq_2 X6 k1_numbers (k1_euclid X0)) \Rightarrow (k8_euclid X0 (k7_euclid \\
 & X0 (k7_euclid X0 X1 X2) X3) (k7_euclid X0 (k7_euclid X0 X4 X5) X6) = \\
 & k7_euclid X0 (k7_euclid X0 (k8_euclid X0 X1 X4) (k8_euclid X0 X2 X5)) \\
 & (k8_euclid X0 X3 X6))))))))) \\
 & \tag{1}
 \end{aligned}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\
 & X1 k1_numbers) \Rightarrow (\forall X2.(m1_subset_1 X2 k5_numbers) \Rightarrow (\forall X3. \\
 & (m2_finseq_2 X3 k1_numbers (k1_euclid X2)) \Rightarrow ((k9_euclid X2 X3 (\\
 & k9_real_1 X0 X1) = k7_euclid X2 (k9_euclid X2 X3 X0) (k9_euclid X2 \\
 & X3 (k1_real_1 X1))) \wedge ((k9_euclid X2 X3 (k9_real_1 X0 X1) = k7_euclid \\
 & X2 (k9_euclid X2 X3 X0) (k6_euclid X2 (k9_euclid X2 X3 X1))) \wedge (k9_euclid \\
 & X2 X3 (k9_real_1 X0 X1) = k8_euclid X2 (k9_euclid X2 X3 X0) (k9_euclid \\
 & X2 X3 X1))))))))) \\
 & \tag{2}
 \end{aligned}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.\forall X1.(m1_finseq_2 X1 X0) \Rightarrow (\forall X2.(m2_finseq_2 \\
 & X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \\
 & \tag{3}
 \end{aligned}$$

Assume the following.

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

Assume the following.

$$v6_membered\ k4_ordinal1 \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((v7_ordinal1\ X0)\wedge((m1_subset_1 \\ X1\ (k1_euclid\ X0))\wedge(v1_xreal_0\ X2)))\Rightarrow(m2_finseq_2\ (k9_euclid \\ X0\ X1\ X2)\ k1_numbers\ (k1_euclid\ X0)) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(m1_finseq_2\ (k1_euclid\ X0)\ k1_numbers) \quad (7)$$

Assume the following.

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

Assume the following.

$$\forall X0.(v6_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow \\ (v7_ordinal1\ X1)) \quad (9)$$

Theorem 1

$$\begin{aligned} \forall X0.(m1_subset_1\ X0\ k1_numbers)\Rightarrow(\forall X1.(m1_subset_1 \\ X1\ k1_numbers)\Rightarrow(\forall X2.(m1_subset_1\ X2\ k1_numbers)\Rightarrow(\forall X3. \\ (m1_subset_1\ X3\ k1_numbers)\Rightarrow(\forall X4.(m1_subset_1\ X4\ k1_numbers)\Rightarrow \\ (\forall X5.(m1_subset_1\ X5\ k1_numbers)\Rightarrow(\forall X6.(m1_subset_1 \\ X6\ k5_numbers)\Rightarrow(\forall X7.(m2_finseq_2\ X7\ k1_numbers\ (k1_euclid \\ X6))\Rightarrow(\forall X8.(m2_finseq_2\ X8\ k1_numbers\ (k1_euclid\ X6))\Rightarrow \\ (\forall X9.(m2_finseq_2\ X9\ k1_numbers\ (k1_euclid\ X6))\Rightarrow(k8_euclid \\ X6\ (k7_euclid\ X6\ (k7_euclid\ X6\ (k9_euclid\ X6\ X7\ X0)\ (k9_euclid\ X6 \\ X8\ X1))\ (k9_euclid\ X6\ X9\ X2))\ (k7_euclid\ X6\ (k7_euclid\ X6\ (k9_euclid \\ X6\ X7\ X3)\ (k9_euclid\ X6\ X8\ X4))\ (k9_euclid\ X6\ X9\ X5)) = k7_euclid\ X6 \\ (k7_euclid\ X6\ (k9_euclid\ X6\ X7\ (k9_real_1\ X0\ X3))\ (k9_euclid\ X6\ X8 \\ (k9_real_1\ X1\ X4))\ (k9_euclid\ X6\ X9\ (k9_real_1\ X2\ X5)))))))))) \end{aligned}$$