

t13_euclidlp (TMF- zoe4FYv4qw4iAEVDNDikbmitJ4xaWNY2)

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

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k1_numbers) \Rightarrow (\forall X2.(m1_subset_1 X2 k5_numbers) \Rightarrow (\forall X3. \\ & (m2_finseq_2 X3 k1_numbers (k1_euclid X2)) \Rightarrow ((k9_euclid X2 X3 (\\ & k9_real_1 X0 X1) = k7_euclid X2 (k9_euclid X2 X3 X0) (k9_euclid X2 \\ & X3 (k1_real_1 X1))) \wedge ((k9_euclid X2 X3 (k9_real_1 X0 X1) = k7_euclid \\ & X2 (k9_euclid X2 X3 X0) (k6_euclid X2 (k9_euclid X2 X3 X1))) \wedge (k9_euclid \\ & X2 X3 (k9_real_1 X0 X1) = k8_euclid X2 (k9_euclid X2 X3 X0) (k9_euclid \\ & X2 X3 X1)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. ((m1_subset_1 X0 k1_numbers) \wedge (v1_xreal_0 X1)) \Rightarrow (m1_subset_1 (k9_real_1 X0 X1) k1_numbers) \tag{2}$$

Assume the following.

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

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k1_numbers) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_numbers) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 k5_numbers) \Rightarrow (\forall X4.(m2_finseq_2 X4 k1_numbers \\ & (k1_euclid X3)) \Rightarrow (k9_euclid X3 X4 (k9_real_1 (k9_real_1 X0 X1) X2) = \\ & k8_euclid X3 (k8_euclid X3 (k9_euclid X3 X4 X0) (k9_euclid X3 X4 X1)) \\ & (k9_euclid X3 X4 X2)))))) \end{aligned}$$