

t42_euclid_8
(TMZYG2FR8UCjxpZTgGBNhxMMSmg7voPhUSe)

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Let $m1_subset.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k6_euclid : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_3 : \iota$ be given. Let $k1_euclid.8 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k2_euclid.8 : \iota$ be given. Let $k3_euclid.8 : \iota$ be given. Let $k4_euclid.8 : \iota$ be given. Let $v1_relat.1 : \iota \Rightarrow o$ be given. Let $v1_funct.1 : \iota \Rightarrow o$ be given. Let $v1_finseq.1 : \iota \Rightarrow o$ be given. Let $k11_finseq.1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_finseq.1 : \iota \Rightarrow \iota$ be given. Let $k1_funct.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $np_2 : \iota$ be given. Let $m2_finseq.2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_euclid : \iota \Rightarrow \iota$ be given. Let $k1_seq.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_valued.0 : \iota \Rightarrow o$ be given. Let $v1_xreal.0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((v1_relat.1 X3) \wedge \\ & ((v1_funct.1 X3) \wedge (v1_finseq.1 X3))) \Rightarrow ((X3 = k11_finseq.1 X0 X1 \\ X2) \Leftrightarrow ((k3_finseq.1 X3 = np_3) \wedge ((k1_funct.1 X3 np_1 = X0) \wedge ((k1_funct.1 \\ X3 np_2 = X1) \wedge (k1_funct.1 X3 np_3 = X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. (m2_finseq.2 X0 k1_numbers (k1_euclid np_3)) \Rightarrow (k6_euclid \\ np_3 X0 = k8_euclid np_3 (k8_euclid np_3 (k6_euclid np_3 (k9_euclid \\ np_3 k2_euclid.8 (k1_seq.1 X0 np_1))) (k9_euclid np_3 k3_euclid.8 \\ (k1_seq.1 X0 np_2))) (k9_euclid np_3 k4_euclid.8 (k1_seq.1 X0 \\ np_3))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_relat.1 X0) \wedge ((v1_funct.1 X0) \wedge (v3_valued.0 \\ X0))) \Rightarrow (k1_seq.1 X0 X1 = k1_funct.1 X0 X1) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1_xreal.0 X0) \wedge ((v1_xreal.0 \\ X1) \wedge (v1_xreal.0 X2))) \Rightarrow (k1_euclid.8 X0 X1 X2 = k11_finseq.1 X0 X1 \\ X2) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(v1_relat_1 (k11_finseq_1 X0 X1 X2)) \wedge (v1_funct_1 (k11_finseq_1 X0 X1 X2)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1_xreal_0 X0) \wedge ((v1_xreal_0 X1) \wedge (v1_xreal_0 X2))) \Rightarrow (v3_valued_0 (k11_finseq_1 X0 X1 X2)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.v1_finseq_1 (k11_finseq_1 X0 X1 X2) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1_xreal_0 X0) \wedge ((v1_xreal_0 X1) \wedge (v1_xreal_0 X2))) \Rightarrow (m2_finseq_2 (k1_euclid_8 X0 X1 X2) k1_numbers (k1_euclid_np_3)) \quad (8)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (9)$$

Theorem 1

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 X1 k1_numbers) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_numbers) \Rightarrow (k6_euclid_np_3 (k1_euclid_8 X0 X1 X2) = k8_euclid_np_3 (k8_euclid_np_3 (k6_euclid_np_3 (k9_euclid_np_3 k2_euclid_8 X0)) (k9_euclid_np_3 k3_euclid_8 X1)) (k9_euclid_np_3 k4_euclid_8 X2))))$$