

t5_euclid_4 (TMPzWHdBNgVTeXpBjKbH-DarL77bj7jxEAkr)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ 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 $k5_euclid : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k10_rvsum_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $m1_finseq_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k24_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_euclid : \iota \Rightarrow \iota$ be given. Let $k10_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\ & ((v1_relat_1 X2) \wedge ((v1_funct_1 X2) \wedge ((v3_valued_0 X2) \wedge (v1_finseq_1 \\ & X2)))) \Rightarrow (k10_rvsum_1 X2 (k11_binop_2 X0 X1) = k10_rvsum_1 (k10_rvsum_1 \\ & X2 X1) X0))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(m2_finseq_2 X1 k1_numbers \\ & (k1_euclid X0)) \Rightarrow ((k9_euclid X0 X1 np_1 = X1) \wedge (k9_euclid X0 X1 k6_numbers = \\ & k5_euclid X0))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(v7_ordinal1 \\ & X1) \Rightarrow (k9_euclid X1 (k5_euclid X1) X0 = k5_euclid X1)) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xcmplx_0 X0) \Rightarrow ((X0 \neq k6_numbers) \Rightarrow (k3_xcmplx_0 \\ & X0 (k7_xcmplx_0 np_1 X0) = np_1)) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & ((v2_xreal_0 \ np_1) \wedge (m2_subset_1 \ np_1 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_1 \ k5_numbers) \wedge (m1_subset_1 \ np_1 \ k1_numbers)) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. (m1_finseq_2 \ X1 \ X0) \Rightarrow (\forall X2. (m2_finseq_2 \ X2 \ X0 \ X1) \Leftrightarrow (m1_subset_1 \ X2 \ X1)) \quad (6)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((v7_ordinal1 \ X0) \wedge ((m1_subset_1 \ X1 \ (k1_euclid \ X0)) \wedge (v1_xreal_0 \ X2))) \Rightarrow (k9_euclid \ X0 \ X1 \ X2 = k24_valued_1 \ X1 \ X2) \quad (7)$$

Assume the following.

$$\forall X0. (v7_ordinal1 \ X0) \Rightarrow (k5_euclid \ X0 = k4_euclid \ X0) \quad (8)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xreal_0 \ X0) \wedge (v1_xreal_0 \ X1)) \Rightarrow (k11_binop_2 \ X0 \ X1 = k3_xcmplx_0 \ X0 \ X1) \quad (9)$$

Assume the following.

$$\forall X0. \forall X1. (((v1_relat_1 \ X0) \wedge ((v1_funct_1 \ X0) \wedge ((v3_valued_0 \ X0) \wedge (v1_finseq_1 \ X0)))) \wedge (v1_xreal_0 \ X1)) \Rightarrow (k10_rvsum_1 \ X0 \ X1 = k24_valued_1 \ X0 \ X1) \quad (10)$$

Assume the following.

$$\forall X0. \forall X1. ((m1_subset_1 \ X0 \ k1_numbers) \wedge (v1_xreal_0 \ X1)) \Rightarrow (k10_real_1 \ X0 \ X1 = k7_xcmplx_0 \ X0 \ X1) \quad (11)$$

Assume the following.

$$\forall X0. \forall X1. (m1_finseq_2 \ X1 \ X0) \Rightarrow (\forall X2. (m2_finseq_2 \ X2 \ X0 \ X1) \Rightarrow (m2_finseq_1 \ X2 \ X0)) \quad (12)$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 \ X1 \ X0) \Rightarrow ((v1_funct_1 \ X1) \wedge ((v1_finseq_1 \ X1) \wedge (m1_subset_1 \ X1 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k5_numbers \ X0)))))) \quad (13)$$

Assume the following.

$$\forall X0. (v7_ordinal1 \ X0) \Rightarrow (m2_finseq_2 \ (k5_euclid \ X0) \ k1_numbers \ (k1_euclid \ X0)) \quad (14)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow((v1_relat_1\ (k4_euclid\ X0))\wedge((v1_funct_1\ (k4_euclid\ X0))\wedge((v1_finseq_1\ (k4_euclid\ X0))\wedge(v3_valued_0\ (k4_euclid\ X0)))))) \quad (15)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(m1_finseq_2\ (k1_euclid\ X0)\ k1_numbers) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1\ X0\ k1_numbers)\wedge(v1_xreal_0\ X1))\Rightarrow(m1_subset_1\ (k10_real_1\ X0\ X1)\ k1_numbers) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0\ X0)\wedge(v1_xreal_0\ X1))\Rightarrow(k11_binop_2\ X0\ X1 = k11_binop_2\ X1\ X0) \quad (18)$$

Assume the following.

$$\forall X0.(v1_xreal_0\ X0)\Rightarrow(v1_xcmplx_0\ X0) \quad (19)$$

Assume the following.

$$\forall X0.((v1_relat_1\ X0)\wedge(v5_relat_1\ X0\ k1_numbers))\Rightarrow((v1_relat_1\ X0)\wedge(v3_valued_0\ X0)) \quad (20)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)))\Rightarrow((v4_relat_1\ X2\ X0)\wedge(v5_relat_1\ X2\ X1)) \quad (21)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k1_numbers)\Rightarrow(v1_xreal_0\ X0) \quad (22)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)))\Rightarrow(v1_relat_1\ X2) \quad (23)$$

Theorem 1

$$\forall X0.(m1_subset_1\ X0\ k1_numbers)\Rightarrow(\forall X1.(v7_ordinal1\ X1)\Rightarrow(\forall X2.(m2_finseq_2\ X2\ k1_numbers\ (k1_euclid\ X1))\Rightarrow(\neg(k9_euclid\ X1\ X2\ X0 = k5_euclid\ X1)\wedge((X0\neq k6_numbers)\wedge(X2\neq k5_euclid\ X1))))))$$