

t7_euclid_2 (TM-
RUmmWVmvRNGeP5zdC4WJ7fZ86L8EZ8nLF)

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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 $v3_valued_0 : \iota \Rightarrow o$ be given. Let $k23_rvsum_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k5_euclid : \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $m2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k1_euclid : \iota \Rightarrow \iota$ be given. Let $k12_euclid : \iota \Rightarrow \iota$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k15_euclid : \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k5_square_1 : \iota \Rightarrow \iota$ be given. Let $np_0 : \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_square_1 : \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v2_finseq_1 : \iota \Rightarrow o$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(m2_finseq_2 X1 k1_numbers (k1_euclid X0)) \Rightarrow ((k12_euclid X1 = k6_numbers) \Rightarrow (X1 = k5_euclid X0))) \quad (1)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (k12_euclid (k5_euclid X0) = k6_numbers) \quad (2)$$

Assume the following.

$$\forall X0.(m2_finseq_1 X0 k1_numbers) \Rightarrow ((m2_finseq_2 X0 k1_numbers (k1_euclid (k3_finseq_1 X0))) \wedge (m1_subset_1 X0 (u1_struct_0 (k15_euclid (k3_finseq_1 X0)))))) \quad (3)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (\neg (k3_xcmplx_0 X0 X1 = k6_numbers) \wedge ((X0 \neq k6_numbers) \wedge (X1 \neq k6_numbers)))) \quad (4)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (5)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge ((v1_finseq_1 X0) \wedge (v3_valued_0 X0)))) \Rightarrow (k5_square_1 (k12_euclid X0) = k23_rvsum_1 X0 X0) \quad (6)$$

Assume the following.

$$v1_xboole_0 np_0 \quad (7)$$

Assume the following.

$$k3_xcmplx_0 np_0 np_0 = np_0 \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (10)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (11)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (k5_square_1 X0 = k3_square_1 X0) \quad (12)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (13)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\exists X1.(m1_finseq_1 X1 X0) \wedge ((v1_relat_1 X1) \wedge ((v4_relat_1 X1 k5_numbers) \wedge ((v5_relat_1 X1 X0) \wedge ((v1_funct_1 X1) \wedge ((\neg v1_xboole_0 X1) \wedge ((v1_finset_1 X1) \wedge ((v1_finseq_1 X1) \wedge (v2_finseq_1 X1)))))))))) \quad (14)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge ((v1_finseq_1 X0) \wedge (v3_valued_0 X0)))) \Rightarrow (m2_finseq_1 X0 k1_numbers) \quad (15)$$

Assume the following.

$$v6_membered\ k4_ordinal1 \quad (16)$$

Assume the following.

$$v3_membered\ k1_numbers \quad (17)$$

Assume the following.

$$\neg v1_xboole_0\ k1_numbers \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1\ X1\ X0)\Rightarrow((v1_funct_1\ X1)\wedge((v1_finseq_1\ X1)\wedge(m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ k5_numbers\ X0)))))) \quad (19)$$

Assume the following.

$$m1_subset_1\ k5_numbers\ (k1_zfmisc_1\ k1_numbers) \quad (20)$$

Assume the following.

$$\forall X0.((v1_relat_1\ X0)\wedge((v1_funct_1\ X0)\wedge(v1_finseq_1\ X0)))\Rightarrow(m2_subset_1\ (k3_finseq_1\ X0)\ k1_numbers\ k5_numbers) \quad (21)$$

Assume the following.

$$\forall X0.((v1_relat_1\ X0)\wedge((v1_funct_1\ X0)\wedge((v1_finseq_1\ X0)\wedge(v3_valued_0\ X0))))\Rightarrow(m1_subset_1\ (k12_euclid\ X0)\ k1_numbers) \quad (22)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0\ X0)\Rightarrow(k3_square_1\ X0 = k3_xcmplx_0\ X0\ X0) \quad (23)$$

Assume the following.

$$\forall X0.(v3_membered\ X0)\Rightarrow(v1_membered\ X0) \quad (24)$$

Assume the following.

$$\forall X0.\forall X1.(v1_xboole_0\ X0)\Rightarrow(\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)))\Rightarrow(v1_xboole_0\ X2)) \quad (25)$$

Assume the following.

$$\forall X0.(v6_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow(v7_ordinal1\ X1)) \quad (26)$$

Assume the following.

$$\forall X0.(v1_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow(v1_xcmplx_0\ X1)) \quad (27)$$

Theorem 1

$$\forall X0.((v1_relat_1\ X0)\wedge((v1_funct_1\ X0)\wedge((v1_finseq_1\ X0)\wedge(v3_valued_0\ X0))))\Rightarrow((k23_rvsum_1\ X0\ X0 = k6_numbers)\Leftrightarrow(X0 = k5_euclid\ (k3_finseq_1\ X0)))$$