

t5_euclid_7 (TM- SASQ8KP6uXuWrSp3QPbKBPs6PTUkHrfAR)

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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 $k7_euclid : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_euclid : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_euclid : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k5_euclid : \iota \Rightarrow \iota$ be given. Let $k9_euclid : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $m1_finseq_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k45_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_euclid : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k30_valued_1 : \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ 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 $v3_membered : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_valued_0 : \iota \Rightarrow o$ 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.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(m2_finseq_2 X1 k1_numbers (k1_euclid X0)) \Rightarrow ((k9_euclid X0 X1 np_1 = X1) \wedge (k9_euclid X0 X1 k6_numbers = k5_euclid X0))) \quad (2)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(m2_finseq_2 X1 k1_numbers (k1_euclid X0)) \Rightarrow ((k7_euclid X0 (k9_euclid X0 X1 k6_numbers) X1 = X1) \wedge (k7_euclid X0 X1 (k5_euclid X0) = X1))) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(m2_finseq_2\ X1\ k1_numbers \\ (k1_euclid\ X0)) \Rightarrow (\forall X2.(m2_finseq_2\ X2\ k1_numbers\ (k1_euclid \\ X0)) \Rightarrow ((k12_euclid\ (k8_euclid\ X0\ X1\ X2) = k6_numbers) \Leftrightarrow (X1 = X2)))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_2\ X1\ X0) \Rightarrow (\forall X2.(m2_finseq_2\ X2\ X0\ X1) \Leftrightarrow (m1_subset_1\ X2\ X1)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1\ X1\ X0) \Leftrightarrow (m1_finseq_1\ X1\ X0) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((v7_ordinal1\ X0) \wedge ((m1_subset_1 \\ X1\ (k1_euclid\ X0)) \wedge (m1_subset_1\ X2\ (k1_euclid\ X0)))) \Rightarrow (k8_euclid \\ X0\ X1\ X2 = k45_valued_1\ X1\ X2) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((v7_ordinal1\ X0) \wedge ((m1_subset_1 \\ X1\ (k1_euclid\ X0)) \wedge (m1_subset_1\ X2\ (k1_euclid\ X0)))) \Rightarrow (k7_euclid \\ X0\ X1\ X2 = k1_valued_1\ X1\ X2) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1\ X0) \wedge (m1_subset_1\ X1\ (k1_euclid\ X0))) \Rightarrow (k6_euclid\ X0\ X1 = k30_valued_1\ X1) \quad (9)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(m2_finseq_2\ X1\ k1_numbers \\ (k1_euclid\ X0)) \Rightarrow (\forall X2.(m2_finseq_2\ X2\ k1_numbers\ (k1_euclid \\ X0)) \Rightarrow (\forall X3.(m2_finseq_2\ X3\ k1_numbers\ (k1_euclid\ X0)) \Rightarrow \\ (k7_euclid\ X0\ X1\ (k7_euclid\ X0\ X2\ X3) = k7_euclid\ X0\ (k7_euclid\ X0 \\ X1\ X2)\ X3)))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((v1_relat_1\ X0) \wedge ((v1_funct_1\ X0) \wedge (v3_valued_0 \\ X0))) \wedge (v1_relat_1\ X1) \wedge ((v1_funct_1\ X1) \wedge (v3_valued_0\ X1))) \Rightarrow \\ ((v1_relat_1\ (k1_valued_1\ X0\ X1)) \wedge (v1_funct_1\ (k1_valued_1 \\ X0\ X1)) \wedge (v3_valued_0\ (k1_valued_1\ X0\ X1))) \end{aligned} \quad (12)$$

Assume the following.

$$v3_membered\ k1_numbers \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_2\ X1\ X0)\Rightarrow(\forall X2.(m2_finseq_2\ X2\ X0\ X1)\Rightarrow(m2_finseq_1\ X2\ X0)) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1\ X1\ X0)\Rightarrow((v1_funct_1\ X1)\wedge((v1_finseq_1\ X1)\wedge(m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ k5_numbers\ X0)))))) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1\ X1\ X0)\Rightarrow((v1_relat_1\ X1)\wedge((v1_funct_1\ X1)\wedge(v1_finseq_1\ X1))) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v7_ordinal1\ X0)\wedge((m1_subset_1\ X1\ (k1_euclid\ X0))\wedge(m1_subset_1\ X2\ (k1_euclid\ X0))))\Rightarrow(m2_finseq_2\ (k8_euclid\ X0\ X1\ X2)\ k1_numbers\ (k1_euclid\ X0)) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1\ X0)\wedge(m1_subset_1\ X1\ (k1_euclid\ X0)))\Rightarrow(m2_finseq_2\ (k6_euclid\ X0\ X1)\ k1_numbers\ (k1_euclid\ X0)) \quad (18)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(m1_finseq_2\ (k1_euclid\ X0)\ k1_numbers) \quad (19)$$

Assume the following.

$$\forall X0.((v1_relat_1\ X0)\wedge((v1_funct_1\ X0)\wedge(v1_valued_0\ X0)))\Rightarrow(\forall X1.((v1_relat_1\ X1)\wedge((v1_funct_1\ X1)\wedge(v1_valued_0\ X1))))\Rightarrow(k45_valued_1\ X0\ X1 = k1_valued_1\ X0\ (k30_valued_1\ X1)) \quad (20)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v7_ordinal1\ X0)\wedge((m1_subset_1\ X1\ (k1_euclid\ X0))\wedge(m1_subset_1\ X2\ (k1_euclid\ X0))))\Rightarrow(k7_euclid\ X0\ X1\ X2 = k7_euclid\ X0\ X2\ X1) \quad (21)$$

Assume the following.

$$\forall X0.\forall X1.(((v1_relat_1\ X0)\wedge((v1_funct_1\ X0)\wedge(v1_valued_0\ X0)))\wedge((v1_relat_1\ X1)\wedge((v1_funct_1\ X1)\wedge(v1_valued_0\ X1))))\Rightarrow(k1_valued_1\ X0\ X1 = k1_valued_1\ X1\ X0) \quad (22)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v3_valued_0 X0)) \Rightarrow ((v1_relat_1 X0) \wedge (v1_valued_0 X0)) \quad (23)$$

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.(v3_membered X1) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v3_valued_0 X2)) \quad (25)$$

Assume the following.

$$\forall X0.\forall X1.(v1_membered X1) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_valued_0 X2)) \quad (26)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(m2_finseq_2 X1 k1_numbers \\ & (k1_euclid X0)) \Rightarrow (\forall X2.(m2_finseq_2 X2 k1_numbers (k1_euclid \\ & X0)) \Rightarrow (\forall X3.(m2_finseq_2 X3 k1_numbers (k1_euclid X0)) \Rightarrow \\ & (k7_euclid X0 (k7_euclid X0 (k8_euclid X0 X1 X2) X3) X2 = k7_euclid \\ & X0 X1 X3)))) \end{aligned}$$