

t5_euclid_8

(TMT661qv92cD2GPV6DooctS59xmbGdeobJx)

October 27, 2020

Let $k12_euclid : \iota \Rightarrow \iota$ be given. Let $k3_euclid_8 : \iota$ be given. Let $np_1 : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k7_square_1 : \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $np_3 : \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_0 : \iota$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k9_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k5_square_1 : \iota \Rightarrow \iota$ be given. Let $k3_square_1 : \iota \Rightarrow \iota$ 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 $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k23_rvsum_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k22_rvsum_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k14_rvsum_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k18_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_rvsum_1 : \iota \Rightarrow \iota$ be given. Let $k39_valued_1 : \iota \Rightarrow \iota$ be given. Let $m2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_euclid : \iota \Rightarrow \iota$ be given. Let $k1_euclid_8 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $m1_finseq_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_valued_0 : \iota \Rightarrow o$ be given. Let $k18_rvsum_1 : \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$k7_square_1 np_1 = np_1 \quad (2)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_3) \wedge (m2_subset_1 np_3 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_3 k5_numbers) \wedge (m1_subset_1 np_3 k1_numbers)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \end{aligned} \quad (4)$$

Assume the following.

$$(m2_subset_1\ np_0\ k1_numbers\ k5_numbers) \wedge ((m1_subset_1\ np_0\ k5_numbers) \wedge (m1_subset_1\ np_0\ k1_numbers)) \quad (5)$$

Assume the following.

$$v1_xboole_0\ np_0 \quad (6)$$

Assume the following.

$$k3_xcmplx_0\ np_1\ np_1 = np_1 \quad (7)$$

Assume the following.

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

Assume the following.

$$k2_xcmplx_0\ np_0\ np_1 = np_1 \quad (9)$$

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0\ X0) \wedge (v1_xreal_0\ X1)) \Rightarrow (k9_binop_2\ X0\ X1 = k2_xcmplx_0\ X0\ X1) \quad (11)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (12)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k1_numbers) \Rightarrow (k5_square_1\ X0 = k3_square_1\ X0) \quad (13)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.(((v1_relat_1\ X0) \wedge ((v1_funct_1\ X0) \wedge (v3_valued_0\ X0) \wedge (v1_finseq_1\ X0)))) \wedge ((v1_relat_1\ X1) \wedge ((v1_funct_1\ X1) \wedge (v3_valued_0\ X1) \wedge (v1_finseq_1\ X1)))) \Rightarrow (k23_rvsum_1\ X0\ X1 = k22_rvsum_1\ X0\ X1) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.(((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge((v3_valued_0 X0)\wedge(v1_finseq_1 X0))))\wedge((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge((v3_valued_0 X1)\wedge(v1_finseq_1 X1))))\Rightarrow(k14_rvsum_1 X0 X1 = k18_valued_1 X0 X1) \quad (16)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge((v3_valued_0 X0)\wedge(v1_finseq_1 X0))))\Rightarrow(k12_rvsum_1 X0 = k39_valued_1 X0) \quad (17)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers)\Rightarrow(\forall X1.(m1_subset_1 X1 k1_numbers)\Rightarrow(\forall X2.(m1_subset_1 X2 k1_numbers)\Rightarrow(\forall X3.(m2_finseq_2 X3 k1_numbers (k1_euclid np_3))\Rightarrow((X3 = k1_euclid_8 X0 X1 X2)\Rightarrow(k23_rvsum_1 X3 X3 = k9_binop_2 (k9_binop_2 (k5_square_1 X0) (k5_square_1 X1)) (k5_square_1 X2)))))) \quad (18)$$

Assume the following.

$$v6_membered k4_ordinal1 \quad (19)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_2 X1 X0)\Rightarrow(\forall X2.(m2_finseq_2 X2 X0 X1)\Rightarrow(m2_finseq_1 X2 X0)) \quad (20)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_finseq_1 X1))) \quad (21)$$

Assume the following.

$$m2_finseq_2 k3_euclid_8 k1_numbers (k1_euclid np_3) \quad (22)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(m1_finseq_2 (k1_euclid X0) k1_numbers) \quad (23)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_valued_0 X0)))\Rightarrow(k39_valued_1 X0 = k18_valued_1 X0 X0) \quad (24)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge((v1_finseq_1 X0)\wedge(v3_valued_0 X0))))\Rightarrow(k12_euclid X0 = k7_square_1 (k18_rvsum_1 (k12_rvsum_1 X0))) \quad (25)$$

Assume the following.

$$k3_euclid_8 = k1_euclid_8 \ k6_numbers \ np_1 \ k6_numbers \quad (26)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 \ X0) \Rightarrow (k3_square_1 \ X0 = k3_xcmplx_0 \ X0 \ X0) \quad (27)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 \ X0) \wedge (v1_funct_1 \ X0) \wedge (v3_valued_0 \\ X0) \wedge (v1_finseq_1 \ X0)) \Rightarrow (\forall X1.((v1_relat_1 \ X1) \wedge (v1_funct_1 \\ X1) \wedge (v3_valued_0 \ X1) \wedge (v1_finseq_1 \ X1))) \Rightarrow (k22_rvsum_1 \ X0 \ X1 = \\ k18_rvsum_1 \ (k14_rvsum_1 \ X0 \ X1)) \end{aligned} \quad (28)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 \ X0) \wedge (v1_xreal_0 \ X1)) \Rightarrow (k9_binop_2 \\ X0 \ X1 = k9_binop_2 \ X1 \ X0) \quad (29)$$

Assume the following.

$$\forall X0.((v1_relat_1 \ X0) \wedge (v3_valued_0 \ X0)) \Rightarrow ((v1_relat_1 \\ X0) \wedge (v1_valued_0 \ X0)) \quad (30)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 \ X1 \ X0) \Rightarrow (v5_relat_1 \ X1 \ X0) \quad (31)$$

Assume the following.

$$\forall X0.((v1_relat_1 \ X0) \wedge (v5_relat_1 \ X0 \ k1_numbers)) \Rightarrow ((v1_relat_1 \\ X0) \wedge (v3_valued_0 \ X0)) \quad (32)$$

Assume the following.

$$\forall X0.(m1_subset_1 \ X0 \ k1_numbers) \Rightarrow (v1_xreal_0 \ X0) \quad (33)$$

Assume the following.

$$\forall X0.(m1_subset_1 \ X0 \ k1_numbers) \Rightarrow (v1_xcmplx_0 \ X0) \quad (34)$$

Assume the following.

$$\forall X0.(v6_membered \ X0) \Rightarrow (\forall X1.(m1_subset_1 \ X1 \ X0) \Rightarrow \\ (v7_ordinal1 \ X1)) \quad (35)$$

Theorem 1 $k12_euclid \ k3_euclid_8 = np_1$.