

t9_euclid_8

(TMUdzpX6EFUagMX8ZbTLvUTVjhNuLXRPL7o)

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Let $r1_rvsum_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_euclid_8 : \iota$ be given. Let $k4_euclid_8 : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ 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 $np_3 : \iota$ 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 $v3_valued_0 : \iota \Rightarrow o$ be given. Let $v2_xreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $k4_ordinal1 : \iota$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_euclid_8 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_euclid : \iota \Rightarrow \iota$ be given. Let $k23_rvsum_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $m1_finseq_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v1_relat_1 X3) \wedge \\ & ((v1_funct_1 X3) \wedge (v1_finseq_1 X3))) \Rightarrow ((X3 = k11_finseq_1 X0 X1 \\ & X2) \Leftrightarrow ((k3_finseq_1 X3 = np_3) \wedge ((k1_funct_1 X3 np_1 = X0) \wedge ((k1_funct_1 \\ & X3 np_2 = X1) \wedge (k1_funct_1 X3 np_3 = X2)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge ((\\ & v3_valued_0 X0) \wedge (v1_finseq_1 X0)))) \wedge ((v1_relat_1 X1) \wedge ((v1_funct_1 \\ & X1) \wedge ((v3_valued_0 X1) \wedge (v1_finseq_1 X1)))))) \Rightarrow ((r1_rvsum_1 X0 \\ & X1) \Rightarrow (r1_rvsum_1 X1 X0)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & ((v2_xreal_0 \ np_3) \wedge (m2_subset_1 \ np_3 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_3 \ k5_numbers) \wedge (m1_subset_1 \ np_3 \ k1_numbers)) \end{aligned} \quad (4)$$

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.

$$\begin{aligned} & (m2_subset_1 \ np_0 \ k1_numbers \ k5_numbers) \wedge ((m1_subset_1 \ np_0 \\ & \quad k5_numbers) \wedge (m1_subset_1 \ np_0 \ k1_numbers)) \end{aligned} \quad (6)$$

Assume the following.

$$v1_xboole_0 \ np_0 \quad (7)$$

Assume the following.

$$k3_xcmplx_0 \ np_1 \ np_0 = np_0 \quad (8)$$

Assume the following.

$$k3_xcmplx_0 \ np_0 \ np_1 = np_0 \quad (9)$$

Assume the following.

$$k3_xcmplx_0 \ np_0 \ np_0 = np_0 \quad (10)$$

Assume the following.

$$k2_xcmplx_0 \ np_0 \ np_0 = np_0 \quad (11)$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 \ X1 \ X0) \Leftrightarrow (m1_finseq_1 \ X1 \ X0) \quad (12)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xreal_0 \ X0) \wedge (v1_xreal_0 \ X1)) \Rightarrow (k9_binop_2 \ X0 \ X1 = k2_xcmplx_0 \ X0 \ X1) \quad (13)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (14)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v3_valued_0 X0)))\Rightarrow(k1_seq_1 X0 X1 = k1_funct_1 X0 X1) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1_xreal_0 X0)\wedge((v1_xreal_0 X1)\wedge(v1_xreal_0 X2)))\Rightarrow(k1_euclid_8 X0 X1 X2 = k11_finseq_1 X0 X1 X2) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0)\wedge(v1_xreal_0 X1))\Rightarrow(k11_binop_2 X0 X1 = k3_xcmplx_0 X0 X1) \quad (18)$$

Assume the following.

$$\forall X0.(m2_finseq_2 X0 k1_numbers (k1_euclid np_3))\Rightarrow(\forall X1.(m2_finseq_2 X1 k1_numbers (k1_euclid np_3))\Rightarrow(k23_rvsum_1 X0 X1 = k9_binop_2 (k9_binop_2 (k11_binop_2 (k1_seq_1 X0 np_1) (k1_seq_1 X1 np_1)) (k11_binop_2 (k1_seq_1 X0 np_2) (k1_seq_1 X1 np_2))) (k11_binop_2 (k1_seq_1 X0 np_3) (k1_seq_1 X1 np_3)))) \quad (19)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(v1_relat_1 (k11_finseq_1 X0 X1 X2))\wedge(v1_funct_1 (k11_finseq_1 X0 X1 X2)) \quad (20)$$

Assume the following.

$$v3_membered k1_numbers \quad (21)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.v1_finseq_1 (k11_finseq_1 X0 X1 X2) \quad (22)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_2 X1 X0)\Rightarrow(\forall X2.(m2_finseq_2 X2 X0 X1)\Rightarrow(m2_finseq_1 X2 X0)) \quad (23)$$

Assume the following.

$$m2_finseq_2 k4_euclid_8 k1_numbers (k1_euclid np_3) \quad (24)$$

Assume the following.

$$m2_finseq_2 k3_euclid_8 k1_numbers (k1_euclid np_3) \quad (25)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(m1_finseq_2\ (k1_euclid\ X0)\ k1_numbers) \quad (26)$$

Assume the following.

$$k4_euclid_8 = k1_euclid_8\ k6_numbers\ k6_numbers\ np_1 \quad (27)$$

Assume the following.

$$k3_euclid_8 = k1_euclid_8\ k6_numbers\ np_1\ k6_numbers \quad (28)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1\ X0)\wedge((v1_funct_1\ X0)\wedge((v3_valued_0 \\ X0)\wedge(v1_finseq_1\ X0))))\Rightarrow(\forall X1.((v1_relat_1\ X1)\wedge((v1_funct_1 \\ X1)\wedge((v3_valued_0\ X1)\wedge(v1_finseq_1\ X1))))\Rightarrow((r1_rvsum_1\ X0\ X1)\Leftrightarrow \\ (k23_rvsum_1\ X0\ X1 = k6_numbers))) \end{aligned} \quad (29)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k4_ordinal1)\Rightarrow(v7_ordinal1\ X0) \quad (30)$$

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.

$$\forall X0.(v3_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow(v1_xreal_0\ X1)) \quad (33)$$

Theorem 1 $r1_rvsum_1\ k3_euclid_8\ k4_euclid_8$.