

t8_euclid_8

(TMah78Mwx67WYov9PCgKSeSw8tM5nZB4CHa)

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Let $r1_rvsum_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_euclid_8 : \iota$ 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 $v2_xxreal_0 : \iota \Rightarrow o$ 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 $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k9_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ 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. 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.

$$\begin{aligned} & ((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & (m2_subset_1 np_0 k1_numbers k5_numbers) \wedge ((m1_subset_1 np_0 \\ & k5_numbers) \wedge (m1_subset_1 np_0 k1_numbers)) \end{aligned} \quad (4)$$

Assume the following.

$$v1_xboole_0 \text{ } np_0 \tag{5}$$

Assume the following.

$$k3_xcmplx_0 \text{ } np_1 \text{ } np_0 = np_0 \tag{6}$$

Assume the following.

$$k3_xcmplx_0 \text{ } np_0 \text{ } np_1 = np_0 \tag{7}$$

Assume the following.

$$k3_xcmplx_0 \text{ } np_0 \text{ } np_0 = np_0 \tag{8}$$

Assume the following.

$$k2_xcmplx_0 \text{ } np_0 \text{ } np_0 = np_0 \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 \text{ } X0)\wedge(v1_xreal_0 \text{ } X1))\Rightarrow(k9_binop_2 \text{ } X0 \text{ } X1 = k2_xcmplx_0 \text{ } X0 \text{ } X1) \tag{10}$$

Assume the following.

$$k6_numbers = k1_xboole_0 \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 \text{ } X0)\wedge((v1_funct_1 \text{ } X0)\wedge(v3_valued_0 \text{ } X0)))\Rightarrow(k1_seq_1 \text{ } X0 \text{ } X1 = k1_funct_1 \text{ } X0 \text{ } X1) \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1_xreal_0 \text{ } X0)\wedge((v1_xreal_0 \text{ } X1)\wedge(v1_xreal_0 \text{ } X2)))\Rightarrow(k1_euclid_8 \text{ } X0 \text{ } X1 \text{ } X2 = k11_finseq_1 \text{ } X0 \text{ } X1 \text{ } X2) \tag{13}$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 \text{ } X0)\wedge(v1_xreal_0 \text{ } X1))\Rightarrow(k11_binop_2 \text{ } X0 \text{ } X1 = k3_xcmplx_0 \text{ } X0 \text{ } X1) \tag{14}$$

Assume the following.

$$\forall X0.(m2_finseq_2 \text{ } X0 \text{ } k1_numbers \text{ } (k1_euclid \text{ } np_3))\Rightarrow(\forall X1.(m2_finseq_2 \text{ } X1 \text{ } k1_numbers \text{ } (k1_euclid \text{ } np_3))\Rightarrow(k23_rvsum_1 \text{ } X0 \text{ } X1 = k9_binop_2 \text{ } (k9_binop_2 \text{ } (k11_binop_2 \text{ } (k1_seq_1 \text{ } X0 \text{ } np_1) \text{ } (k1_seq_1 \text{ } X1 \text{ } np_1)) \text{ } (k11_binop_2 \text{ } (k1_seq_1 \text{ } X0 \text{ } np_2) \text{ } (k1_seq_1 \text{ } X1 \text{ } np_2))) \text{ } (k11_binop_2 \text{ } (k1_seq_1 \text{ } X0 \text{ } np_3) \text{ } (k1_seq_1 \text{ } X1 \text{ } np_3)))) \tag{15}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(v1_relat_1 (k11_finseq_1 X0 X1 X2))\wedge(v1_funct_1 (k11_finseq_1 X0 X1 X2)) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1_xreal_0 X0)\wedge((v1_xreal_0 X1)\wedge(v1_xreal_0 X2)))\Rightarrow(v3_valued_0 (k11_finseq_1 X0 X1 X2)) \quad (17)$$

Assume the following.

$$v3_membered\ k1_numbers \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.v1_finseq_1 (k11_finseq_1 X0 X1 X2) \quad (19)$$

Assume the following.

$$m2_finseq_2\ k4_euclid_8\ k1_numbers\ (k1_euclid\ np_3) \quad (20)$$

Assume the following.

$$m2_finseq_2\ k2_euclid_8\ k1_numbers\ (k1_euclid\ np_3) \quad (21)$$

Assume the following.

$$k4_euclid_8 = k1_euclid_8\ k6_numbers\ k6_numbers\ np_1 \quad (22)$$

Assume the following.

$$k2_euclid_8 = k1_euclid_8\ np_1\ k6_numbers\ k6_numbers \quad (23)$$

Assume the following.

$$\begin{aligned} &\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge((v3_valued_0 X0)\wedge(v1_finseq_1 X0))))\Rightarrow(\forall X1.((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge((v3_valued_0 X1)\wedge(v1_finseq_1 X1))))\Rightarrow((r1_rvsum_1 X0 X1)\Leftrightarrow \\ &\quad (k23_rvsum_1 X0 X1 = k6_numbers))) \end{aligned} \quad (24)$$

Assume the following.

$$\forall X0.(v3_membered X0)\Rightarrow(\forall X1.(m1_subset_1 X1 X0)\Rightarrow(v1_xreal_0 X1)) \quad (25)$$

Theorem 1 $r1_rvsum_1\ k2_euclid_8\ k4_euclid_8$.