

t72_euclid_8

(TMchjyjZq95zLL4B57Vemsis974CZWCRoAC)

October 27, 2020

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 $np_3 : \iota$ be given. Let $k23_rvsum_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_euclid : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_binop_2 : \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k4_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_rvsum_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k5_numbers : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k30_valued_1 : \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(m2_finseq_2 X1 k1_numbers \\ & (k4_finseq_2 X0 k1_numbers)) \Rightarrow (\forall X2.(m2_finseq_2 X2 k1_numbers \\ & (k4_finseq_2 X0 k1_numbers)) \Rightarrow (k23_rvsum_1 (k7_rvsum_1 X0 X1) \\ & X2 = k7_binop_2 (k23_rvsum_1 X1 X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_3) \wedge (m2_subset_1 np_3 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_3 k5_numbers) \wedge (m1_subset_1 np_3 k1_numbers)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(m1_finseq_2 X1 X0) \Rightarrow (\forall X2.(m2_finseq_2 \\ & X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v7_ordinal1 X0) \wedge (m1_subset_1 X1 (k4_finseq_2 \\ & X0 k1_numbers))) \Rightarrow (k7_rvsum_1 X0 X1 = k30_valued_1 X1) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v7_ordinal1 X0) \wedge (m1_subset_1 X1 (k1_euclid \\ & X0))) \Rightarrow (k6_euclid X0 X1 = k30_valued_1 X1) \end{aligned} \quad (5)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (6)$$

Assume the following.

$$v6_membered\ k4_ordinal1 \quad (7)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow (m1_finseq_2\ (k1_euclid\ X0)\ k1_numbers) \quad (8)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow (k1_euclid\ X0 = k4_finseq_2\ X0\ k1_numbers) \quad (9)$$

Assume the following.

$$\forall X0.(v6_membered\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ X0) \Rightarrow (v7_ordinal1\ X1)) \quad (10)$$

Theorem 1

$$\forall X0.(m2_finseq_2\ X0\ k1_numbers\ (k1_euclid\ np_3)) \Rightarrow (\forall X1. (m2_finseq_2\ X1\ k1_numbers\ (k1_euclid\ np_3)) \Rightarrow (k23_rvsum_1\ (k6_euclid\ np_3\ X0)\ X1 = k7_binop_2\ (k23_rvsum_1\ X0\ X1)))$$