

t22_bintree2

(TMQXiregUR7T8VBskE7xLHsuQLfnHAagEdi)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_trees_1 : \iota \Rightarrow o$ be given. Let $v1_bintree2 : \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_bintree2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k10_binarith : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_finseq_1 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k5_euclid : \iota \Rightarrow \iota$ 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 $k1_numbers : \iota$ be given. Let $k5_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k5_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_euclid : \iota \Rightarrow \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.k2_finseq_2\ np_1\ X0 = k9_finseq_1\ X0 \quad (1)$$

Assume the following.

$$m1_subset_1\ k1_xboole_0\ k4_ordinal1 \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_xboole_0\ X0) \wedge ((v1_trees_1\ X0) \wedge (v1_bintree2 \\ X0))) \Rightarrow (\forall X1.((\neg v1_xboole_0\ X1) \wedge (m1_subset_1\ X1\ k5_numbers)) \Rightarrow \\ (k1_funct_1\ (k2_bintree2\ X0\ X1)\ np_1 = k5_euclid\ X1)) \end{aligned} \quad (3)$$

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.

$$\neg v1_xboole_0\ np_1 \quad (5)$$

Assume the following.

$$\forall X0.k9_finseq_1\ X0 = k5_finseq_1\ X0 \quad (6)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (7)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge((v7_ordinal1 X1)\wedge(m1_subset_1 X2 X0)))\Rightarrow(k5_finseq_2 X0 X1 X2 = k2_finseq_2 X1 X2) \quad (9)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(k5_euclid X0 = k4_euclid X0) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge(m1_subset_1 X1 X0))\Rightarrow(k10_binarith X0 X1 = k5_finseq_1 X1) \quad (11)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1)\wedge(v3_ordinal1 k4_ordinal1) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 X0))))\Rightarrow(\forall X2.(m2_subset_1 X2 X0 X1)\Rightarrow(m1_subset_1 X2 X0)) \quad (13)$$

Assume the following.

$$m2_subset_1 k6_numbers k1_numbers k5_numbers \quad (14)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (15)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(k4_euclid X0 = k5_finseq_2 k1_numbers X0 k6_numbers) \quad (16)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1)\Rightarrow(v7_ordinal1 X0) \quad (17)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0))\Rightarrow(v1_xboole_0 X1)) \quad (18)$$

Theorem 1

$$\forall X0.((\neg v1_xboole_0 X0)\wedge((v1_trees_1 X0)\wedge(v1_bintree2 X0)))\Rightarrow(k1_funct_1 (k2_bintree2 X0 np_1) np_1 = k10_binarith k5_numbers k6_numbers)$$