

t65_trees_3

(TMRU6dUEF4PLQnn9dZwVBBZ1Lx7gKRrV5eS)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_trees_1 : \iota \Rightarrow o$ be given. Let $k4_trees_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_trees_3 : \iota \Rightarrow \iota$ be given. Let $k12_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k6_numbers : \iota$ 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 $v4_trees_3 : \iota \Rightarrow o$ be given. Let $k2_trees_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_trees_3 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_finseq_1 : \iota \Rightarrow \iota$ 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 $np_0 : \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\ & ((v4_trees_3 X0) \Rightarrow ((k2_trees_2 (k11_trees_3 X0) np_1 = ReplSep \\ & \quad (toset (\lambda X1 : \iota. m1_subset_1 X1 k5_numbers)) (\lambda X1 : \iota. \\ & \quad \neg r1_xxreal_0 (k3_finseq_1 X0) X1) (\lambda X1 : \iota. k12_finseq_1 k5_numbers \\ & \quad X1)) \wedge (\forall X1.(m1_subset_1 X1 k5_numbers) \Rightarrow ((\neg r1_xxreal_0 \\ & \quad (k3_finseq_1 X0) X1) \Rightarrow (k4_trees_1 (k11_trees_3 X0) (k12_finseq_1 \\ & \quad k5_numbers X1) = k1_funct_1 X0 (k2_nat_1 X1 np_1)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \Rightarrow ((X1 = k9_finseq_1 X0) \Leftrightarrow ((k3_finseq_1 X1 = np_1) \wedge (k1_funct_1 X1 np_1 = X0))) \quad (3)$$

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.

$$k2_xcmplx_0\ np_0\ np_1 = np_1 \quad (7)$$

Assume the following.

$$\neg r1_xxreal_0\ np_1\ np_0 \quad (8)$$

Assume the following.

$$\forall X0. k9_finseq_1\ X0 = k5_finseq_1\ X0 \quad (9)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (10)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (11)$$

Assume the following.

$$\forall X0. \forall X1. ((m1_subset_1\ X0\ k5_numbers) \wedge (v7_ordinal1\ X1)) \Rightarrow (k2_nat_1\ X0\ X1 = k2_xcmplx_0\ X0\ X1) \quad (12)$$

Assume the following.

$$\forall X0. ((\neg v1_xboole_0\ X0) \wedge (v1_trees_1\ X0)) \Rightarrow ((\neg v1_xboole_0\ (k5_finseq_1\ X0)) \wedge (v4_trees_3\ (k5_finseq_1\ X0))) \quad (13)$$

Assume the following.

$$\forall X0. v1_finseq_1\ (k5_finseq_1\ X0) \quad (14)$$

Assume the following.

$$\forall X0. (v1_relat_1\ (k9_finseq_1\ X0)) \wedge (v1_funct_1\ (k9_finseq_1\ X0)) \quad (15)$$

Assume the following.

$$\forall X0. ((\neg v1_xboole_0\ X0) \wedge (v1_trees_1\ X0)) \Rightarrow (k12_trees_3\ X0 = k11_trees_3\ (k9_finseq_1\ X0)) \quad (16)$$

Assume the following.

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

Theorem 1

$$\forall X0. ((\neg v1_xboole_0\ X0) \wedge (v1_trees_1\ X0)) \Rightarrow (k4_trees_1\ (k12_trees_3\ X0)\ (k12_finseq_1\ k5_numbers\ k6_numbers) = X0)$$