

t10_trees_4

(TMWCm4jpPh9hBRae7qTTVbVvtqSfkrJ9EkG)

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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 $v6_trees_3 : \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k4_trees_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_trees_3 : \iota \Rightarrow \iota$ be given. Let $k2_funct_6 : \iota \Rightarrow \iota$ be given. Let $v3_trees_2 : \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k5_trees_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \Rightarrow ((v1_relat_1 (k4_trees_4 X0 X1)) \wedge ((v1_funct_1 (k4_trees_4 X0 X1)) \wedge (v3_trees_2 (k4_trees_4 X0 X1)))) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \Rightarrow ((v6_trees_3 X1) \Rightarrow (\forall X2. ((v1_relat_1 X2) \wedge ((v1_funct_1 X2) \wedge (v3_trees_2 X2)))) \Rightarrow ((X2 = k4_trees_4 X0 X1) \Leftrightarrow ((\exists X3. (\\ & (v1_relat_1 X3) \wedge ((v1_funct_1 X3) \wedge ((v1_finseq_1 X3) \wedge (v6_trees_3 X3)))) \wedge ((X1 = X3) \wedge (k9_xtuple_0 X2 = k11_trees_3 (k2_funct_6 X3)))) \wedge \\ & ((k1_funct_1 X2 k1_xboole_0 = X0) \wedge (\forall X3. (m1_subset_1 X3 k5_numbers) \Rightarrow ((\neg r1_xxreal_0 (k3_finseq_1 X1) X3) \Rightarrow (k5_trees_2 X2 (k12_finseq_1 k5_numbers X3) = k1_funct_1 X1 (k2_nat_1 X3 np_1)))))))))) \quad (2) \end{aligned}$$

Theorem 1

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge ((v1_finseq_1 X1) \wedge (v6_trees_3 X1)))) \Rightarrow (k9_xtuple_0 (k4_trees_4 X0 X1) = k11_trees_3 (k2_funct_6 X1))$$