

l4_ntalgo_1

(TMd7VMkEwwCVH8B3GkU8Pk7XZqgbBd5k7f8)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_numbers : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k1_int_2 : \iota \Rightarrow \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k4_nat_d : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0 : \iota \Rightarrow o. ((X0 \ k6_numbers) \wedge (\forall X1. (m2_subset_1 \\ & X1 \ k1_numbers \ k5_numbers) \Rightarrow ((X0 \ X1) \Rightarrow (X0 \ (k2_nat_1 \ X1 \ np_1)))))) \Rightarrow \\ & (\forall X1. (m2_subset_1 \ X1 \ k1_numbers \ k5_numbers) \Rightarrow (X0 \ X1)) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 \ X0) \wedge ((\neg v1_xboole_0 \ X1) \wedge \\ & (m1_subset_1 \ X1 \ (k1_zfmisc_1 \ X0)))) \Rightarrow (\forall X2. (m2_subset_1 \\ & X2 \ X0 \ X1) \Leftrightarrow (m1_subset_1 \ X2 \ X1)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((v1_funct_1 \ X1) \wedge ((v1_funct_2 \\ & X1 \ k5_numbers \ X0) \wedge (m1_subset_1 \ X1 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k5_numbers \\ & X0)))))) \wedge (v7_ordinal1 \ X2)) \Rightarrow (k8_nat_1 \ X0 \ X1 \ X2 = k1_funct_1 \ X1 \ X2) \end{aligned} \quad (3)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (4)$$

Assume the following.

$$(\neg v1_xboole_0 \ k4_ordinal1) \wedge (v3_ordinal1 \ k4_ordinal1) \quad (5)$$

Assume the following.

$$\neg v1_xboole_0 \ k1_numbers \quad (6)$$

Assume the following.

$$m1_subset_1 \ k5_numbers \ (k1_zfmisc_1 \ k1_numbers) \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v1_funct_1 \ X2)\wedge((v1_funct_2 \\ & X2 \ X0 \ X1)\wedge(m1_subset_1 \ X2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ X0 \ X1))))))\Rightarrow \\ & (\forall X3.((v1_funct_1 \ X3)\wedge((v1_funct_2 \ X3 \ X0 \ X1)\wedge(m1_subset_1 \\ & X3 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ X0 \ X1))))))\Rightarrow((r2_funct_2 \ X0 \ X1 \ X2 \ X3)\Leftrightarrow \\ & (\forall X4.(m1_subset_1 \ X4 \ X0)\Rightarrow(k1_funct_1 \ X2 \ X4 = k1_funct_1 \\ & X3 \ X4)))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.(m1_subset_1 \ X0 \ k4_ordinal1)\Rightarrow(v7_ordinal1 \ X0) \quad (9)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 \ X0 \ k4_numbers)\Rightarrow(\forall X1.(m1_subset_1 \\ & X1 \ k4_numbers)\Rightarrow(\forall X2.((v1_funct_1 \ X2)\wedge((v1_funct_2 \ X2 \\ & k5_numbers \ k5_numbers)\wedge(m1_subset_1 \ X2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \\ & k5_numbers \ k5_numbers))))))\Rightarrow(\forall X3.((v1_funct_1 \ X3)\wedge((\\ & v1_funct_2 \ X3 \ k5_numbers \ k5_numbers)\wedge(m1_subset_1 \ X3 \ (k1_zfmisc_1 \\ & (k2_zfmisc_1 \ k5_numbers \ k5_numbers))))))\Rightarrow(\forall X4.((v1_funct_1 \\ & X4)\wedge((v1_funct_2 \ X4 \ k5_numbers \ k5_numbers)\wedge(m1_subset_1 \ X4 \ (\\ & k1_zfmisc_1 \ (k2_zfmisc_1 \ k5_numbers \ k5_numbers))))))\Rightarrow(\forall X5. \\ & ((v1_funct_1 \ X5)\wedge((v1_funct_2 \ X5 \ k5_numbers \ k5_numbers)\wedge(m1_subset_1 \\ & X5 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k5_numbers \ k5_numbers))))))\Rightarrow(((\\ & k8_nat_1 \ k5_numbers \ X2 \ k6_numbers = k1_int_2 \ X0)\wedge((k8_nat_1 \ k5_numbers \\ & X3 \ k6_numbers = k1_int_2 \ X1)\wedge((\forall X6.(m2_subset_1 \ X6 \ k1_numbers \\ & k5_numbers)\Rightarrow((k8_nat_1 \ k5_numbers \ X2 \ (k2_nat_1 \ X6 \ np_1) = k8_nat_1 \\ & k5_numbers \ X3 \ X6)\wedge(k8_nat_1 \ k5_numbers \ X3 \ (k2_nat_1 \ X6 \ np_1) = \\ & k4_nat_d \ (k8_nat_1 \ k5_numbers \ X2 \ X6) \ (k8_nat_1 \ k5_numbers \ X3 \ X6))))))\wedge \\ & ((k8_nat_1 \ k5_numbers \ X4 \ k6_numbers = k1_int_2 \ X0)\wedge((k8_nat_1 \\ & k5_numbers \ X5 \ k6_numbers = k1_int_2 \ X1)\wedge(\forall X6.(m2_subset_1 \\ & X6 \ k1_numbers \ k5_numbers)\Rightarrow((k8_nat_1 \ k5_numbers \ X4 \ (k2_nat_1 \\ & X6 \ np_1) = k8_nat_1 \ k5_numbers \ X5 \ X6)\wedge(k8_nat_1 \ k5_numbers \ X5 \ (\\ & k2_nat_1 \ X6 \ np_1) = k4_nat_d \ (k8_nat_1 \ k5_numbers \ X4 \ X6) \ (k8_nat_1 \\ & k5_numbers \ X5 \ X6))))))\Rightarrow((r2_funct_2 \ k5_numbers \ k5_numbers \\ & X2 \ X4)\wedge(r2_funct_2 \ k5_numbers \ k5_numbers \ X3 \ X5)))))) \end{aligned}$$