

t22_mod_2
(TMaijusDt48xZ4HTppieiUj1herstbKbhxP)

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Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $k18_mod_2 : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k5_struct_0 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $r1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $u1_algstr_0 : \iota \Rightarrow \iota$ be given. Let $k13_mod_2 : \iota$ be given. Let $u2_algstr_0 : \iota \Rightarrow \iota$ be given. Let $k14_mod_2 : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ 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 $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $g6_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l6_algstr_0 : \iota \Rightarrow o$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $l5_algstr_0 : \iota \Rightarrow o$ be given. Let $l4_algstr_0 : \iota \Rightarrow o$ be given. Let $l4_struct_0 : \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Let $l3_struct_0 : \iota \Rightarrow o$ be given. Let $l1_algstr_0 : \iota \Rightarrow o$ be given. Let $v36_algstr_0 : \iota \Rightarrow o$ be given. Let $k17_mod_2 : \iota$ be given. Let $k16_mod_2 : \iota$ be given. Let $u3_struct_0 : \iota \Rightarrow \iota$ be given. Let $u2_struct_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. \forall X5. \\ & ((\neg v1_xboole_0 X1) \wedge (\neg v1_xboole_0 X3) \wedge ((v1_funct_1 X4) \wedge ((v1_funct_2 X4 X0 X1) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \wedge ((v1_funct_1 X5) \wedge ((v1_funct_2 X5 X2 X3) \wedge (m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 X2 X3)))))) \Rightarrow (r1_funct_2 X0 X1 X2 X3 X4 X4) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. (((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (k2_zfmisc_1 X0 X0) X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 X0 X0) X0)))))) \wedge ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (k2_zfmisc_1 X0 X0) X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 X0 X0) X0)))))) \wedge ((m1_subset_1 X3 X0) \wedge (m1_subset_1 X4 X0))) \Rightarrow (\forall X5. \forall X6. \forall X7. \forall X8. \\ & \forall X9. (g6_algstr_0 X0 X1 X2 X3 X4 = g6_algstr_0 X5 X6 X7 X8 X9) \Rightarrow ((X0 = X5) \wedge ((X1 = X6) \wedge ((X2 = X7) \wedge ((X3 = X8) \wedge (X4 = X9)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\neg v1_xboole_0 (k1_enumset1 X0 X1 X2) \quad (3)$$

Assume the following.

$$\forall X0.(l6_algstr_0 X0)\Rightarrow((l2_algstr_0 X0)\wedge(l5_algstr_0 X0)) \quad (4)$$

Assume the following.

$$\forall X0.(l5_algstr_0 X0)\Rightarrow((l4_algstr_0 X0)\wedge(l4_struct_0 X0)) \quad (5)$$

Assume the following.

$$\forall X0.(l4_struct_0 X0)\Rightarrow((l2_struct_0 X0)\wedge(l3_struct_0 X0)) \quad (6)$$

Assume the following.

$$\forall X0.(l2_algstr_0 X0)\Rightarrow((l2_struct_0 X0)\wedge(l1_algstr_0 X0)) \quad (7)$$

Assume the following.

$$(v36_algstr_0 k18_mod_2)\wedge(l6_algstr_0 k18_mod_2) \quad (8)$$

Assume the following.

$$m1_subset_1 k17_mod_2 (k1_enumset1 k6_numbers np_1 np_2) \quad (9)$$

Assume the following.

$$m1_subset_1 k16_mod_2 (k1_enumset1 k6_numbers np_1 np_2) \quad (10)$$

Assume the following.

$$\begin{aligned} & (v1_funct_1 k14_mod_2)\wedge((v1_funct_2 k14_mod_2 (k2_zfmisc_1 \\ & (k1_enumset1 k6_numbers np_1 np_2) (k1_enumset1 k6_numbers \\ & np_1 np_2)) (k1_enumset1 k6_numbers np_1 np_2))\wedge(m1_subset_1 \\ & k14_mod_2 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 (k1_enumset1 \\ & k6_numbers np_1 np_2) (k1_enumset1 k6_numbers np_1 np_2)) \\ & (k1_enumset1 k6_numbers np_1 np_2)))))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & (v1_funct_1 k13_mod_2)\wedge((v1_funct_2 k13_mod_2 (k2_zfmisc_1 \\ & (k1_enumset1 k6_numbers np_1 np_2) (k1_enumset1 k6_numbers \\ & np_1 np_2)) (k1_enumset1 k6_numbers np_1 np_2))\wedge(m1_subset_1 \\ & k13_mod_2 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 (k1_enumset1 \\ & k6_numbers np_1 np_2) (k1_enumset1 k6_numbers np_1 np_2)) \\ & (k1_enumset1 k6_numbers np_1 np_2)))))) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0.(l3_struct_0 X0) \Rightarrow (k5_struct_0 X0 = u3_struct_0 X0) \quad (13)$$

Assume the following.

$$\forall X0.(l2_struct_0 X0) \Rightarrow (k4_struct_0 X0 = u2_struct_0 X0) \quad (14)$$

Assume the following.

$$k18_mod_2 = g6_algstr_0 (k1_enumset1 k6_numbers np_1 np_2) k13_mod_2 \\ k14_mod_2 k16_mod_2 k17_mod_2 \quad (15)$$

Assume the following.

$$k17_mod_2 = k6_numbers \quad (16)$$

Assume the following.

$$k16_mod_2 = np_1 \quad (17)$$

Assume the following.

$$\forall X0.(l6_algstr_0 X0) \Rightarrow ((v36_algstr_0 X0) \Rightarrow (X0 = g6_algstr_0 \\ (u1_struct_0 X0) (u1_algstr_0 X0) (u2_algstr_0 X0) (u3_struct_0 \\ X0) (u2_struct_0 X0))) \quad (18)$$

Theorem 1

$$(k4_struct_0 k18_mod_2 = k6_numbers) \wedge ((k5_struct_0 k18_mod_2 = \\ np_1) \wedge ((m1_subset_1 (k4_struct_0 k18_mod_2) (k1_enumset1 k6_numbers \\ np_1 np_2)) \wedge ((m1_subset_1 (k5_struct_0 k18_mod_2) (k1_enumset1 \\ k6_numbers np_1 np_2)) \wedge ((r1_funct_2 (k2_zfmisc_1 (u1_struct_0 \\ k18_mod_2) (u1_struct_0 k18_mod_2)) (u1_struct_0 k18_mod_2) \\ (k2_zfmisc_1 (k1_enumset1 k6_numbers np_1 np_2) (k1_enumset1 \\ k6_numbers np_1 np_2)) (k1_enumset1 k6_numbers np_1 np_2) \\ (u1_algstr_0 k18_mod_2) k13_mod_2) \wedge (r1_funct_2 (k2_zfmisc_1 \\ (u1_struct_0 k18_mod_2) (u1_struct_0 k18_mod_2)) (u1_struct_0 \\ k18_mod_2) (k2_zfmisc_1 (k1_enumset1 k6_numbers np_1 np_2) \\ (k1_enumset1 k6_numbers np_1 np_2)) (k1_enumset1 k6_numbers \\ np_1 np_2) (u2_algstr_0 k18_mod_2) k14_mod_2))))))$$