

t10_scmpds_3
(TMYLHgFZJTorG9fcNddxybWt8sizjPKx2zg)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_scmpds_2 : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v5_funct_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_memstr_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_ordinal1 : \iota \Rightarrow \iota$ be given. Let $k5_memstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k17_scmpds_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ 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 $k5_numbers : \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k1_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_int_1 : \iota \Rightarrow o$ be given. Let $k1_int_2 : \iota \Rightarrow \iota$ be given. Let $k16_complex1 : \iota \Rightarrow \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. \neg (X0 \in X1) \wedge ((m1_subset_1 X1 (k1_zfmisc_1 X2)) \wedge (v1_xboole_0 X2)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (2)$$

Assume the following.

$$\forall X0. (v7_ordinal1 X0) \Rightarrow (r1_xxreal_0 k6_numbers X0) \quad (3)$$

Assume the following.

$$((v2_xxreal_0 np_2) \wedge (m2_subset_1 np_2 k1_numbers k5_numbers)) \wedge ((m1_subset_1 np_2 k5_numbers) \wedge (m1_subset_1 np_2 k1_numbers)) \quad (4)$$

Assume the following.

$$((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 X0))))\Rightarrow(\forall X2.(m2_subset_1 X2 X0 X1)\Leftrightarrow(m1_subset_1 X2 X1)) \quad (6)$$

Assume the following.

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

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 X0)\wedge(m1_subset_1 X1 k5_numbers))\Rightarrow(k1_nat_1 X0 X1 = k2_xcmplx_0 X0 X1) \quad (9)$$

Assume the following.

$$\forall X0.(v1_int_1 X0)\Rightarrow(k1_int_2 X0 = k16_complex1 X0) \quad (10)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1)\wedge(v3_ordinal1 k4_ordinal1) \quad (11)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 X0)\wedge(m1_subset_1 X1 k5_numbers))\Rightarrow(m2_subset_1 (k1_nat_1 X0 X1) k1_numbers k5_numbers) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.(((v1_relat_1 X0)\wedge((v4_relat_1 X0 (u1_struct_0 k1_scmpds_2))\wedge((v1_funct_1 X0)\wedge((v5_funct_1 X0 (k2_memstr_0 np_2 k1_scmpds_2))\wedge(v1_partfun1 X0 (u1_struct_0 k1_scmpds_2))))))\wedge(v1_int_1 X1))\Rightarrow(m1_subset_1 (k17_scmpds_2 X0 X1) k5_numbers) \quad (14)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(k1_ordinal1 X0 = k1_nat_1 X0 np_1) \quad (15)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(((r1_xxreal_0 k6_numbers X0)\Rightarrow(k16_complex1 X0 = X0))\wedge((\neg r1_xxreal_0 k6_numbers X0)\Rightarrow(k16_complex1 X0 = k4_xcmplx_0 X0))) \quad (16)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 (u1_struct_0 k1_scmpds_2)) \wedge \\
& ((v1_funct_1 X0) \wedge ((v5_funct_1 X0 (k2_memstr_0 np_2 k1_scmpds_2)) \wedge \\
& (v1_partfun1 X0 (u1_struct_0 k1_scmpds_2)))))) \Rightarrow (\forall X1. \\
& (v1_int_1 X1) \Rightarrow (\forall X2.(m1_subset_1 X2 k5_numbers) \Rightarrow ((X2 = \\
& k17_scmpds_2 X0 X1) \Leftrightarrow (\exists X3.(m1_subset_1 X3 k5_numbers) \wedge \\
& ((X3 = k5_memstr_0 np_2 k1_scmpds_2 X0) \wedge (X2 = k1_int_2 (k2_xcmplx_0 \\
& X3 X1))))))
\end{aligned} \tag{17}$$

Assume the following.

$$\forall X0. \forall X1. ((v7_ordinal1 X0) \wedge (m1_subset_1 X1 k5_numbers)) \Rightarrow (k1_nat_1 X0 X1 = k1_nat_1 X1 X0) \tag{18}$$

Assume the following.

$$\forall X0. (m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \tag{19}$$

Assume the following.

$$\forall X0. (v7_ordinal1 X0) \Rightarrow (v1_xreal_0 X0) \tag{20}$$

Assume the following.

$$\forall X0. (v7_ordinal1 X0) \Rightarrow (v1_int_1 X0) \tag{21}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 (u1_struct_0 k1_scmpds_2)) \wedge \\
& ((v1_funct_1 X0) \wedge ((v5_funct_1 X0 (k2_memstr_0 np_2 k1_scmpds_2)) \wedge \\
& (v1_partfun1 X0 (u1_struct_0 k1_scmpds_2)))))) \Rightarrow (k1_ordinal1 \\
& (k5_memstr_0 np_2 k1_scmpds_2 X0) = k17_scmpds_2 X0 np_1)
\end{aligned}$$