

t10_rsspace
(TMdizus3xFfM7WfRD4KSetYHT9sfHkJAMh5)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $g1_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_rsspace : \iota$ be given. Let $k6_rsspace : \iota$ be given. Let $k4_rsspace : \iota$ be given. Let $k5_rsspace : \iota$ be given. Let $k1_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k1_numbers : \iota$ be given. Let $k26_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k2_rsspace : \iota \Rightarrow \iota$ 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 $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_xreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k24_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_rlvect_1 : \iota \Rightarrow o$ be given. Let $l1_rlvect_1 : \iota \Rightarrow o$ be given. Let $u2_struct_0 : \iota \Rightarrow \iota$ be given. Let $u1_algstr_0 : \iota \Rightarrow \iota$ be given. Let $u1_rlvect_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 (u1_struct_0 (g1_rlvect_1 k1_rsspace k6_rsspace k4_rsspace \\ & k5_rsspace))) \Rightarrow (k1_rlvect_1 (g1_rlvect_1 k1_rsspace k6_rsspace \\ & k4_rsspace k5_rsspace) X1 X0 = k26_valued_1 k5_numbers k1_numbers \\ & (k2_rsspace X1) X0)) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\ & (r2_funct_2 k5_numbers k1_numbers (k26_valued_1 k5_numbers k1_numbers \\ & X0 np_1) X0) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & ((v2_xreal_0 \ np_1) \wedge (m2_subset_1 \ np_1 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_1 \ k5_numbers) \wedge (m1_subset_1 \ np_1 \ k1_numbers)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (((v1_funct_1 \ X2) \wedge \\ & ((v1_funct_2 \ X2 \ X0 \ X1) \wedge (m1_subset_1 \ X2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \\ & X0 \ X1)))))) \wedge ((v1_funct_1 \ X3) \wedge ((v1_funct_2 \ X3 \ X0 \ X1) \wedge (m1_subset_1 \\ & X3 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ X0 \ X1)))))) \Rightarrow ((r2_funct_2 \ X0 \ X1 \ X2 \\ & X3) \Leftrightarrow (X2 = X3)) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((v3_membered \ X1) \wedge \\ & (((v1_funct_1 \ X2) \wedge (m1_subset_1 \ X2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \\ & X0 \ X1)))) \wedge (v1_xreal_0 \ X3))) \Rightarrow (k26_valued_1 \ X0 \ X1 \ X2 \ X3 = k24_valued_1 \\ & X2 \ X3) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((m1_subset_1 \ X1 \\ & X0) \wedge (((v1_funct_1 \ X2) \wedge ((v1_funct_2 \ X2 \ (k2_zfmisc_1 \ X0 \ X0) \ X0) \wedge \\ & (m1_subset_1 \ X2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ (k2_zfmisc_1 \ X0 \ X0) \\ & X0)))))) \wedge ((v1_funct_1 \ X3) \wedge ((v1_funct_2 \ X3 \ (k2_zfmisc_1 \ k1_numbers \\ & X0) \ X0) \wedge (m1_subset_1 \ X3 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ (k2_zfmisc_1 \\ & k1_numbers \ X0) \ X0)))))) \Rightarrow (\forall X4. \forall X5. \forall X6. \forall X7. \\ & (g1_rlvect_1 \ X0 \ X1 \ X2 \ X3 = g1_rlvect_1 \ X4 \ X5 \ X6 \ X7) \Rightarrow ((X0 = X4) \wedge ((X1 = \\ & X5) \wedge ((X2 = X6) \wedge (X3 = X7)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (((\neg v1_xboole_0 \\ & X1) \wedge (v3_membered \ X1)) \wedge (((v1_funct_1 \ X2) \wedge ((v1_funct_2 \ X2 \ X0 \ X1) \wedge \\ & (m1_subset_1 \ X2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ X0 \ X1)))))) \wedge (v1_xreal_0 \\ & X3)) \Rightarrow ((v1_funct_1 \ (k24_valued_1 \ X2 \ X3)) \wedge (v1_partfun1 \ (k24_valued_1 \\ & X2 \ X3) \ X0)) \end{aligned} \quad (8)$$

Assume the following.

$$v3_membered \ k1_numbers \quad (9)$$

Assume the following.

$$\neg v1_xboole_0 \ k1_numbers \quad (10)$$

Assume the following.

$$m1_subset_1 \ k6_rspace \ k1_rspace \quad (11)$$

Assume the following.

$$(v1_funct_1\ k5_rsspace) \wedge ((v1_funct_2\ k5_rsspace\ (k2_zfmisc_1\ k1_numbers\ k1_rsspace)\ k1_rsspace) \wedge (m1_subset_1\ k5_rsspace\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k2_zfmisc_1\ k1_numbers\ k1_rsspace)\ k1_rsspace)))) \quad (12)$$

Assume the following.

$$(v1_funct_1\ k4_rsspace) \wedge ((v1_funct_2\ k4_rsspace\ (k2_zfmisc_1\ k1_rsspace\ k1_rsspace)\ k1_rsspace) \wedge (m1_subset_1\ k4_rsspace\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k2_zfmisc_1\ k1_rsspace\ k1_rsspace)\ k1_rsspace)))) \quad (13)$$

Assume the following.

$$\forall X0.(v1_funct_1\ (k2_rsspace\ X0)) \wedge ((v1_funct_2\ (k2_rsspace\ X0)\ k5_numbers\ k1_numbers) \wedge (m1_subset_1\ (k2_rsspace\ X0)\ (k1_zfmisc_1\ (k2_zfmisc_1\ k5_numbers\ k1_numbers)))) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v3_membered\ X1) \wedge (((v1_funct_1\ X2) \wedge (m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)))) \wedge (v1_xreal_0\ X3))) \Rightarrow ((v1_funct_1\ (k26_valued_1\ X0\ X1\ X2\ X3)) \wedge (m1_subset_1\ (k26_valued_1\ X0\ X1\ X2\ X3)\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ k1_numbers)))) \quad (15)$$

Assume the following.

$$\neg v1_xboole_0\ k1_rsspace \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((m1_subset_1\ X1\ X0) \wedge (((v1_funct_1\ X2) \wedge ((v1_funct_2\ X2\ (k2_zfmisc_1\ X0\ X0)\ X0) \wedge (m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k2_zfmisc_1\ X0\ X0)\ X0)))) \wedge ((v1_funct_1\ X3) \wedge ((v1_funct_2\ X3\ (k2_zfmisc_1\ k1_numbers\ X0)\ X0) \wedge (m1_subset_1\ X3\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k2_zfmisc_1\ k1_numbers\ X0)\ X0))))))) \Rightarrow ((v1_rlvect_1\ (g1_rlvect_1\ X0\ X1\ X2\ X3)) \wedge (l1_rlvect_1\ (g1_rlvect_1\ X0\ X1\ X2\ X3))) \quad (17)$$

Assume the following.

$$\forall X0.(X0 \in k1_rsspace) \Rightarrow (k2_rsspace\ X0 = X0) \quad (18)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k1_numbers) \Rightarrow (v1_xreal_0\ X0) \quad (19)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow((v1_partfun1 X2 X0)\Rightarrow(v1_funct_2 X2 X0 X1)) \quad (20)$$

Assume the following.

$$\forall X0.(l1_rlvect_1 X0)\Rightarrow((v1_rlvect_1 X0)\Rightarrow(X0 = g1_rlvect_1 (u1_struct_0 X0) (u2_struct_0 X0) (u1_algstr_0 X0) (u1_rlvect_1 X0))) \quad (21)$$

Theorem 1

$$\forall X0.(m1_subset_1 X0 (u1_struct_0 (g1_rlvect_1 k1_rsspace k6_rsspace k4_rsspace k5_rsspace)))\Rightarrow(k1_rlvect_1 (g1_rlvect_1 k1_rsspace k6_rsspace k4_rsspace k5_rsspace) X0 \text{ np_1} = X0)$$