

t12_bhsp_2 (TMdHQFmNiFPQbgCHypRD- dEXwaDooLkteeRb)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v13_algstr_0 : \iota \Rightarrow o$ be given. Let $v2_rlvect_1 : \iota \Rightarrow o$ be given. Let $v3_rlvect_1 : \iota \Rightarrow o$ be given. Let $v4_rlvect_1 : \iota \Rightarrow o$ be given. Let $v5_rlvect_1 : \iota \Rightarrow o$ be given. Let $v6_rlvect_1 : \iota \Rightarrow o$ be given. Let $v7_rlvect_1 : \iota \Rightarrow o$ be given. Let $v8_rlvect_1 : \iota \Rightarrow o$ be given. Let $v2_bhsp_1 : \iota \Rightarrow o$ be given. Let $l1_bhsp_1 : \iota \Rightarrow o$ 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 $k5_numbers : \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_bhsp_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_normsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_bhsp_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k4_bhsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v2_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xxreal_0 X2) \Rightarrow ((r1_xxreal_0 X0 X1) \wedge (r1_xxreal_0 X1 X2)) \Rightarrow \\ & (r1_xxreal_0 X0 X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ & ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v2_bhsp_1 \\ & X0) \wedge (l1_bhsp_1 X0)))))))))) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge \\ & ((v1_funct_2 X1 k5_numbers (u1_struct_0 X0)) \wedge (m1_subset_1 X1 \\ & (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 X0)))))) \Rightarrow \\ & (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k5_numbers (u1_struct_0 \\ & X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 \\ & X0)))))) \Rightarrow ((v1_bhsp_2 X1 X0) \Rightarrow ((\forall X3.(m1_subset_1 X3 k5_numbers) \Rightarrow \\ & (\exists X4.(m1_subset_1 X4 k5_numbers) \wedge ((r1_xxreal_0 X3 X4) \wedge \\ & (k1_normsp_1 X0 X2 X4 \neq k1_normsp_1 X0 X1 X4)))) \vee (v1_bhsp_2 X2 X0)))))) \end{aligned} \quad (2)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (3)$$

Assume the following.

$$v3_membered\ k1_numbers \quad (4)$$

Assume the following.

$$m1_subset_1\ k5_numbers\ (k1_zfmisc_1\ k1_numbers) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((\neg v2_struct_0\ X0)\wedge((v13_algstr_0\ X0)\wedge \\ & ((v2_rlvect_1\ X0)\wedge((v3_rlvect_1\ X0)\wedge((v4_rlvect_1\ X0)\wedge((v5_rlvect_1 \\ & X0)\wedge((v6_rlvect_1\ X0)\wedge((v7_rlvect_1\ X0)\wedge((v8_rlvect_1\ X0)\wedge \\ & ((v2_bhsp_1\ X0)\wedge(l1_bhsp_1\ X0))))))))))\wedge((v1_funct_1\ X1)\wedge \\ & ((v1_funct_2\ X1\ k5_numbers\ (u1_struct_0\ X0))\wedge(m1_subset_1\ X1 \\ & (k1_zfmisc_1\ (k2_zfmisc_1\ k5_numbers\ (u1_struct_0\ X0))))))\Rightarrow \\ & (m1_subset_1\ (k1_bhsp_2\ X0\ X1)\ (u1_struct_0\ X0)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0\ X0)\wedge((v13_algstr_0\ X0)\wedge((v2_rlvect_1 \\ & X0)\wedge((v3_rlvect_1\ X0)\wedge((v4_rlvect_1\ X0)\wedge((v5_rlvect_1\ X0)\wedge \\ & ((v6_rlvect_1\ X0)\wedge((v7_rlvect_1\ X0)\wedge((v8_rlvect_1\ X0)\wedge((v2_bhsp_1 \\ & X0)\wedge(l1_bhsp_1\ X0))))))))))\Rightarrow(\forall X1.((v1_funct_1\ X1)\wedge \\ & ((v1_funct_2\ X1\ k5_numbers\ (u1_struct_0\ X0))\wedge(m1_subset_1\ X1 \\ & (k1_zfmisc_1\ (k2_zfmisc_1\ k5_numbers\ (u1_struct_0\ X0))))))\Rightarrow \\ & ((v1_bhsp_2\ X1\ X0)\Rightarrow(\forall X2.(m1_subset_1\ X2\ (u1_struct_0\ X0))\Rightarrow \\ & (X2 = k1_bhsp_2\ X0\ X1)\Leftrightarrow(\forall X3.(m1_subset_1\ X3\ k1_numbers)\Rightarrow \\ & (\neg(\neg r1_xxreal_0\ X3\ k6_numbers)\wedge(\forall X4.(m1_subset_1\ X4\ k5_numbers)\Rightarrow \\ & (\exists X5.(m1_subset_1\ X5\ k5_numbers)\wedge((r1_xxreal_0\ X4\ X5)\wedge \\ & (r1_xxreal_0\ X3\ (k4_bhsp_1\ X0\ (k1_normsp_1\ X0\ X1\ X5)\ X2)))))))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0\ X0)\wedge(v1_xxreal_0\ X1))\Rightarrow((r1_xxreal_0\ X0\ X1)\vee(r1_xxreal_0\ X1\ X0)) \quad (8)$$

Assume the following.

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

Assume the following.

$$\forall X0.(v3_membered\ X0)\Rightarrow(v2_membered\ X0) \quad (10)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(v1_xxreal_0\ X0) \quad (11)$$

Assume the following.

$$\forall X0.(v2_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ X0))\Rightarrow(v2_membered\ X1)) \quad (12)$$

Assume the following.

$$\forall X0.(v2_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow(v1_xxreal_0\ X1)) \quad (13)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0\ X0)\wedge((v13_algstr_0\ X0)\wedge((v2_rlvect_1\ X0)\wedge((v3_rlvect_1\ X0)\wedge((v4_rlvect_1\ X0)\wedge((v5_rlvect_1\ X0)\wedge \\ & ((v6_rlvect_1\ X0)\wedge((v7_rlvect_1\ X0)\wedge((v8_rlvect_1\ X0)\wedge((v2_bhsp_1\ X0)\wedge(l1_bhsp_1\ X0))))))))))\Rightarrow(\forall X1.((v1_funct_1\ X1)\wedge \\ & ((v1_funct_2\ X1\ k5_numbers\ (u1_struct_0\ X0))\wedge(m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ k5_numbers\ (u1_struct_0\ X0))))))\Rightarrow \\ & (\forall X2.((v1_funct_1\ X2)\wedge((v1_funct_2\ X2\ k5_numbers\ (u1_struct_0\ X0))\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ k5_numbers\ (u1_struct_0\ X0))))))\Rightarrow \\ & ((v1_bhsp_2\ X1\ X0)\Rightarrow((\forall X3.(m1_subset_1\ X3\ k5_numbers)\Rightarrow(\exists X4.(m1_subset_1\ X4\ k5_numbers)\wedge((r1_xxreal_0\ X3\ X4)\wedge \\ & (k1_normsp_1\ X0\ X2\ X4\neq k1_normsp_1\ X0\ X1\ X4))))\vee(k1_bhsp_2\ X0\ X1 = k1_bhsp_2\ X0\ X2)))))) \end{aligned}$$