

t18_vfunct_2

(TMTW7yusxSTekpNRkh78NYnFBQyztJJW283)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. 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 $v3_normsp_0 : \iota \Rightarrow o$ be given. Let $v4_normsp_0 : \iota \Rightarrow o$ be given. Let $v2_clvect_1 : \iota \Rightarrow o$ be given. Let $v3_clvect_1 : \iota \Rightarrow o$ be given. Let $v4_clvect_1 : \iota \Rightarrow o$ be given. Let $v5_clvect_1 : \iota \Rightarrow o$ be given. Let $v8_clvect_1 : \iota \Rightarrow o$ be given. Let $l2_clvect_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ 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 $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_vfunct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_complex1 : \iota$ be given. Let $v1_membered : \iota \Rightarrow o$ be given. Let $k2_numbers : \iota$ be given. Let $l1_clvect_1 : \iota \Rightarrow o$ be given. Let $l2_normsp_0 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_clvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \Rightarrow ((r2_relset_1 X0 X1 X2 X3) \Leftrightarrow (X2 = X3)) \quad (1)$$

Assume the following.

$$v1_membered k2_numbers \quad (2)$$

Assume the following.

$$\forall X0.(l2_clvect_1 X0) \Rightarrow ((l1_clvect_1 X0) \wedge (l2_normsp_0 X0)) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1_relat_1 X1) \wedge ((v5_relat_1 X1 X0) \wedge (v1_funct_1 X1))) \Rightarrow (m1_subset_1 (k7_partfun1 X0 X1 X2) X0) \quad (4)$$

Assume the following.

$$m1_subset_1 \ k6_complex1 \ k2_numbers \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 \ X0) \wedge (l1_clvect_1 \ X0)) \Rightarrow ((v5_clvect_1 \\ X0) \Leftrightarrow (\forall X1.(m1_subset_1 \ X1 \ (u1_struct_0 \ X0)) \Rightarrow (k1_clvect_1 \\ X0 \ X1 \ k6_complex1 = X1))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 \ X0) \Rightarrow (\forall X1.((\neg v2_struct_0 \ X1) \wedge \\ ((v13_algstr_0 \ X1) \wedge ((v2_rlvect_1 \ X1) \wedge ((v3_rlvect_1 \ X1) \wedge ((v4_rlvect_1 \\ X1) \wedge ((v3_normsp_0 \ X1) \wedge ((v4_normsp_0 \ X1) \wedge ((v2_clvect_1 \ X1) \wedge \\ ((v3_clvect_1 \ X1) \wedge ((v4_clvect_1 \ X1) \wedge ((v5_clvect_1 \ X1) \wedge ((v8_clvect_1 \\ X1) \wedge (l2_clvect_1 \ X1)))))))))))))) \Rightarrow (\forall X2.((v1_funct_1 \\ X2) \wedge (m1_subset_1 \ X2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ X0 \ (u1_struct_0 \\ X1)))))) \Rightarrow (\forall X3.(v1_xcmplx_0 \ X3) \Rightarrow (\forall X4.((v1_funct_1 \\ X4) \wedge (m1_subset_1 \ X4 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ X0 \ (u1_struct_0 \\ X1)))))) \Rightarrow ((X4 = k2_vfunct_2 \ X0 \ X1 \ X2 \ X3) \Leftrightarrow ((k1_relset_1 \ X0 \ X4 = k1_relset_1 \\ X0 \ X2) \wedge (\forall X5.(m1_subset_1 \ X5 \ X0) \Rightarrow ((X5 \in k1_relset_1 \ X0 \ X4) \Rightarrow \\ (k7_partfun1 \ (u1_struct_0 \ X1) \ X4 \ X5 = k1_clvect_1 \ X1 \ (k7_partfun1 \\ (u1_struct_0 \ X1) \ X2 \ X5) \ X3)))))))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 \ X2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ X0 \ X1))) \Rightarrow ((v4_relat_1 \ X2 \ X0) \wedge (v5_relat_1 \ X2 \ X1)) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 \ X2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ X0 \ X1))) \Rightarrow (v1_relat_1 \ X2) \quad (9)$$

Assume the following.

$$\forall X0.(v1_membered \ X0) \Rightarrow (\forall X1.(m1_subset_1 \ X1 \ X0) \Rightarrow (v1_xcmplx_0 \ X1)) \quad (10)$$

Theorem 1

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 \ X0) \Rightarrow (\forall X1.((\neg v2_struct_0 \ X1) \wedge \\ ((v13_algstr_0 \ X1) \wedge ((v2_rlvect_1 \ X1) \wedge ((v3_rlvect_1 \ X1) \wedge ((v4_rlvect_1 \\ X1) \wedge ((v3_normsp_0 \ X1) \wedge ((v4_normsp_0 \ X1) \wedge ((v2_clvect_1 \ X1) \wedge \\ ((v3_clvect_1 \ X1) \wedge ((v4_clvect_1 \ X1) \wedge ((v5_clvect_1 \ X1) \wedge ((v8_clvect_1 \\ X1) \wedge (l2_clvect_1 \ X1)))))))))))))) \Rightarrow (\forall X2.((v1_funct_1 \\ X2) \wedge (m1_subset_1 \ X2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ X0 \ (u1_struct_0 \\ X1)))))) \Rightarrow (r2_relset_1 \ X0 \ (u1_struct_0 \ X1) \ (k2_vfunct_2 \ X0 \ X1 \ X2 \\ k6_complex1) \ X2))) \end{aligned}$$