

143_glib_000 (TMZGqH-
poYPF8PV34NDxeePMWJfYWpfSXCyT)

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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 $k5_numbers : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v1_glib_000 : \iota \Rightarrow o$ be given. Let $k7_glib_000 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_glib_000 : \iota \Rightarrow \iota$ be given. Let $k11_glib_000 : \iota \Rightarrow \iota$ be given. Let $k21_glib_000 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k9_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k19_glib_000 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k18_glib_000 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 X0)) \Rightarrow (k9_subset_1 X0 X1 X2 = k3_xboole_0 X1 X2) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0))))) \Rightarrow (m1_subset_1 (k19_glib_000 X0 X1) (k1_zfmisc_1 (k7_glib_000 X0))) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0))))) \Rightarrow (m1_subset_1 (k18_glib_000 X0 X1) (k1_zfmisc_1 (k7_glib_000 X0))) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k3_xboole_0 X0 X1) \Leftrightarrow (\forall X3.(X3 \in X2) \Leftrightarrow ((X3 \in X0) \wedge (X3 \in X1))) \quad (4)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0))))) \Rightarrow (\forall X1.k21_glib_000 X0 X1 = k9_subset_1 (k7_glib_000 X0) (k18_glib_000 X0 X1) (k19_glib_000 X0 X1)) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ & \quad X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1. \forall X2. \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k7_glib_000 X0))) \Rightarrow ((X2 = k19_glib_000 \\ & \quad X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 \in k7_glib_000 X0) \wedge (k1_funct_1 \\ & \quad (k10_glib_000 X0) X3 \in X1)))))) \end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ & \quad X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1. \forall X2. \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k7_glib_000 X0))) \Rightarrow ((X2 = k18_glib_000 \\ & \quad X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 \in k7_glib_000 X0) \wedge (k1_funct_1 \\ & \quad (k11_glib_000 X0) X3 \in X1)))))) \end{aligned} \tag{7}$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ & \quad X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1. \forall X2. \\ & ((X1 \in k7_glib_000 X0) \wedge ((k1_funct_1 (k10_glib_000 X0) X1 \in X2) \wedge \\ & (k1_funct_1 (k11_glib_000 X0) X1 \in X2))) \Leftrightarrow (X1 \in k21_glib_000 X0 X2)) \end{aligned}$$