

t80_classes1

(TMUEZxBpaERxM87t8LiLQc4xK1xeptr4CuK)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $r2_classes1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $k3_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v2_funct_1 : \iota \Rightarrow o$ be given. Let $k2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_funct_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.((\\ v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow ((r2_classes1 X0 X1) \Leftrightarrow (\exists X2. \\ ((v1_relat_1 X2) \wedge (v1_funct_1 X2)) \wedge ((k9_xtuple_0 X2 = k9_xtuple_0 \\ X0) \wedge ((k10_xtuple_0 X2 = k9_xtuple_0 X1) \wedge ((v2_funct_1 X2) \wedge (X0 = \\ k3_relat_1 X2 X1))))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 X0 X0) \wedge \\ (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))) \Rightarrow (((v2_funct_1 \\ X1) \wedge (k2_relset_1 X0 X1 = X0)) \Rightarrow ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 \\ X0 X0) \wedge ((v3_funct_2 X1 X0 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ X0 X0))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow ((r1_tarski \\ (k10_xtuple_0 X1) X0) \Rightarrow ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (k9_xtuple_0 \\ X1) X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (k9_xtuple_0 \\ X1) X0)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((v1_relat_1 X0) \wedge (v1_relat_1 X1)) \Rightarrow ((r2_classes1 \\ X0 X1) \Rightarrow (r2_classes1 X1 X0)) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X0)\wedge(v1_relat_1 X1))\Rightarrow(r2_classes1 X0 X0) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.r1_tarski X0 X0 \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v5_relat_1 X1 X0))\Rightarrow(k2_relset_1 X0 X1 = k10_xtuple_0 X1) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v4_relat_1 X1 X0))\Rightarrow(k1_relset_1 X0 X1 = k9_xtuple_0 X1) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v5_relat_1 X1 X0))\Rightarrow(v2_funct_2 X1 X0)\Leftrightarrow(k2_relset_1 X0 X1 = X0) \quad (9)$$

Assume the following.

$$\begin{aligned} &\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ &(k2_zfmisc_1 X0 X1)))\Rightarrow(((X1\neq k1_xboole_0)\Rightarrow((v1_funct_2 X2 X0 \\ &X1)\Leftrightarrow(X0 = k1_relset_1 X0 X2)))\wedge((X1 = k1_xboole_0)\Rightarrow((v1_funct_2 \\ &X2 X0 X1)\Leftrightarrow(X2 = k1_xboole_0)))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} &\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ &(k2_zfmisc_1 X0 X1)))\Rightarrow(((v1_funct_1 X2)\wedge(v3_funct_2 X2 X0 X1))\Rightarrow \\ &((v1_funct_1 X2)\wedge((v2_funct_1 X2)\wedge(v2_funct_2 X2 X1)))) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow((v4_relat_1 X2 X0)\wedge(v5_relat_1 X2 X1)) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \quad (13)$$

Theorem 1

$$\begin{aligned} &\forall X0.((v1_relat_1 X0)\wedge(v1_funct_1 X0))\Rightarrow(\forall X1.((\\ &v1_relat_1 X1)\wedge(v1_funct_1 X1))\Rightarrow((k9_xtuple_0 X0 = k9_xtuple_0 \\ &X1)\Rightarrow((r2_classes1 X0 X1)\Leftrightarrow(\exists X2.((v1_funct_1 X2)\wedge((v1_funct_2 \\ &X2 (k9_xtuple_0 X0) (k9_xtuple_0 X0))\wedge((v3_funct_2 X2 (k9_xtuple_0 \\ &X0) (k9_xtuple_0 X0))\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ &(k9_xtuple_0 X0) (k9_xtuple_0 X0))))))\wedge(X0 = k3_relat_1 X2 X1)))))) \end{aligned}$$