

t59_funct_4 (TMcgT- FKV7qvZwKfXFzbfmS7WCttHrVpwRqq)

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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 $k3_funct.4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat.1 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_xtuple.0 : \iota \Rightarrow \iota$ be given. Let $k10_xtuple.0 : \iota \Rightarrow \iota$ be given. Let $v5_relat.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_relset.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_relat.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relset.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. ((v1_relat.1 \\ & X4) \wedge (v1_funct.1 X4)) \Rightarrow (\forall X5. ((v1_relat.1 X5) \wedge (v1_funct.1 \\ & X5)) \Rightarrow (((r1_tarski (k9_xtuple.0 X4) (k2_zfmisc.1 X0 X1)) \wedge (r1_tarski \\ & (k9_xtuple.0 X5) (k2_zfmisc.1 X2 X3))) \Rightarrow (r1_tarski (k9_xtuple.0 \\ & (k3_funct.4 X4 X5)) (k2_zfmisc.1 (k2_zfmisc.1 X0 X2) (k2_zfmisc.1 \\ & X1 X3)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_relat.1 X0) \wedge (v1_funct.1 X0)) \Rightarrow (\forall X1. ((\\ & v1_relat.1 X1) \wedge (v1_funct.1 X1)) \Rightarrow (r1_tarski (k10_xtuple.0 (k3_funct.4 \\ & X0 X1)) (k2_zfmisc.1 (k10_xtuple.0 X0) (k10_xtuple.0 X1)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (v1_relat.1 X2) \Rightarrow (((r1_tarski \\ & (k9_xtuple.0 X2) X0) \wedge (r1_tarski (k10_xtuple.0 X2) X1)) \Rightarrow (m1_subset.1 \\ & X2 (k1_zfmisc.1 (k2_zfmisc.1 X0 X1)))) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset.1 X0 (k1_zfmisc.1 X1)) \Leftrightarrow (r1_tarski X0 X1) \tag{4}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((r1_tarski X0 X1) \wedge (r1_tarski X1 X2)) \Rightarrow (r1_tarski X0 X2) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v5_relat_1 X1 X0))\Rightarrow(k2_relset_1 X0 X1 = k10_xtuple_0 X1) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v4_relat_1 X1 X0))\Rightarrow(k1_relset_1 X0 X1 = k9_xtuple_0 X1) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(((v1_relat_1 X0)\wedge(v1_funct_1 X0))\wedge((v1_relat_1 X1)\wedge(v1_funct_1 X1)))\Rightarrow((v1_relat_1 (k3_funct_4 X0 X1))\wedge(v1_funct_1 (k3_funct_4 X0 X1))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v5_relat_1 X1 X0))\Rightarrow(m1_subset_1 (k2_relset_1 X0 X1) (k1_zfmisc_1 X0)) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v4_relat_1 X1 X0))\Rightarrow(m1_subset_1 (k1_relset_1 X0 X1) (k1_zfmisc_1 X0)) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow((v4_relat_1 X2 X0)\wedge(v5_relat_1 X2 X1)) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \quad (12)$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5.\forall X6.(((v1_funct_1 X6)\wedge(m1_subset_1 X6 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 X0 X1) X2))))\Rightarrow(\forall X7.(((v1_funct_1 X7)\wedge(m1_subset_1 X7 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 X3 X4) X5))))\Rightarrow((v1_funct_1 (k3_funct_4 X6 X7))\wedge(m1_subset_1 (k3_funct_4 X6 X7) (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 X0 X3) (k2_zfmisc_1 X1 X4)) (k2_zfmisc_1 X2 X5))))))))$$