

t19_scmring1 (TMWD- PDNiHY6suAkavxGNvGyQfcTbDgRpG68)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_card_3 : \iota \Rightarrow \iota$ be given. Let $k3_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_ami_2 : \iota$ be given. Let $k1_scmring1 : \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_ami_2 : \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v2_relat_1 : \iota \Rightarrow o$ be given. Let $v4_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_2 : \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.((\\ v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow ((X0 \in k4_card_3 X1) \Leftrightarrow ((k9_xtuple_0 \\ X0 = k9_xtuple_0 X1) \wedge (\forall X2.(X2 \in k9_xtuple_0 X1) \Rightarrow (k1_funct_1 \\ X0 X2 \in k1_funct_1 X1 X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (2)$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (k9_xtuple_0 (k3_relat_1 k3_ami_2 (k1_scmring1 X0)) = k1_ami_2) \quad (3)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge ((v2_relat_1 X0) \wedge (v1_funct_1 X0))) \Rightarrow (\neg v1_xboole_0 (k4_card_3 X0)) \quad (4)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (v4_funct_1 (k4_card_3 X0)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(((v1_relat_1 X0)\wedge(v1_funct_1 X0))\wedge((v1_relat_1 X1)\wedge(v1_funct_1 X1)))\Rightarrow((v1_relat_1 (k3_relat_1 X0 X1))\wedge(v1_funct_1 (k3_relat_1 X0 X1))) \quad (6)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge(l1_struct_0 X0))\Rightarrow((v1_relat_1 (k3_relat_1 k3_ami_2 (k1_scmring1 X0)))\wedge(v2_relat_1 (k3_relat_1 k3_ami_2 (k1_scmring1 X0)))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.v1_relat_1 (k3_relat_1 X0 X1) \quad (8)$$

Assume the following.

$$(v1_funct_1 k3_ami_2)\wedge((v1_funct_2 k3_ami_2 k1_ami_2 np_2)\wedge(m1_subset_1 k3_ami_2 (k1_zfmisc_1 (k2_zfmisc_1 k1_ami_2 np_2)))) \quad (9)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge(l1_struct_0 X0))\Rightarrow((v1_relat_1 (k1_scmring1 X0))\wedge((v4_relat_1 (k1_scmring1 X0) np_2)\wedge((v1_funct_1 (k1_scmring1 X0))\wedge(v1_partfun1 (k1_scmring1 X0) np_2)))) \quad (10)$$

Assume the following.

$$\forall X0.(v4_funct_1 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge(v1_funct_1 X1))) \quad (11)$$

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

$$\forall X0.((\neg v2_struct_0 X0)\wedge(l1_struct_0 X0))\Rightarrow(\forall X1.(m1_subset_1 X1 (k4_card_3 (k3_relat_1 k3_ami_2 (k1_scmring1 X0))))\Rightarrow(k9_xtuple_0 X1 = k1_ami_2))$$