

l8_petri_2

(TMV5RggavbcQcyt2BkB87da5FXHtSBiQ97y)

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Let $v1_zfmisc_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k5_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_relat_1 : \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (v1_relat_1 X1) \Rightarrow (k5_relat_1 X1 X0 = k3_relat_1 (k4_relat_1 X0) X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (v1_relat_1 X1) \Rightarrow ((r1_tarski X0 (k9_xtuple_0 X1)) \Rightarrow (k9_xtuple_0 (k5_relat_1 X1 X0) = X0)) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (v1_relat_1 X1) \Rightarrow (k9_xtuple_0 (k5_relat_1 X1 X0) = k3_xboole_0 (k9_xtuple_0 X1) X0) \quad (3)$$

Assume the following.

$$\forall X0. k9_xtuple_0 (k4_relat_1 X0) = X0 \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_zfmisc_1 X0) \Rightarrow (\forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 X1)) \Rightarrow (\forall X3. (m1_subset_1 X3 (k1_zfmisc_1 X1)) \Rightarrow (\forall X4. ((v1_funct_1 X4) \wedge ((v1_funct_2 X4 X2 X0) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 X2 X0)))))) \Rightarrow (\forall X5. ((v1_funct_1 X5) \wedge ((v1_funct_2 X5 X3 X0) \wedge (m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 X3 X0)))))) \Rightarrow (\neg (\neg r1_tarski X3 X2) \wedge (\forall X6. ((v1_funct_1 X6) \wedge ((v1_funct_2 X6 X1 X0) \wedge (m1_subset_1 X6 (k1_zfmisc_1 (k2_zfmisc_1 X1 X0)))))) \Rightarrow (\neg (k2_partfun1 X1 X0 X6 X2 = X4) \wedge (k2_partfun1 X1 X0 X6 X3 \neq X5)))))) \quad (5) \end{aligned}$$

Assume the following.

$$\forall X0.\forall X1.(v1_relat_1 X0)\Rightarrow(v1_relat_1 (k5_relat_1 X0 X1)) \quad (6)$$

Assume the following.

$$\forall X0.v1_relat_1 (k4_relat_1 X0) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.k3_xboole_0 X0 X1 = k3_xboole_0 X1 X0 \quad (8)$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_zfmisc_1 X0)\Rightarrow(\forall X1.\forall X2.(m1_subset_1 \\ & X2 (k1_zfmisc_1 X1))\Rightarrow(\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 \\ & X1))\Rightarrow(\forall X4.((v1_funct_1 X4)\wedge((v1_funct_2 X4 X2 X0)\wedge(m1_subset_1 \\ & X4 (k1_zfmisc_1 (k2_zfmisc_1 X2 X0))))))\Rightarrow(\forall X5.((v1_funct_1 \\ & X5)\wedge((v1_funct_2 X5 X3 X0)\wedge(m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X3 X0))))))\Rightarrow(\neg(X2\neq X3)\wedge((r1_tarski X3 X2)\wedge(\forall X6.((v1_funct_1 \\ & X6)\wedge((v1_funct_2 X6 X1 X0)\wedge(m1_subset_1 X6 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X1 X0))))))\Rightarrow(\neg(k2_partfun1 X1 X0 X6 X3 = X5)\wedge(k2_partfun1 X1 X0 X6 \\ & X2\neq X4)))))))))) \end{aligned}$$