

t7_ff_siec

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Let $v1_net_1 : \iota \Rightarrow o$ be given. Let $l1_petri : \iota \Rightarrow o$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_net_1 : \iota \Rightarrow \iota$ be given. Let $u4_struct_0 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $r1_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_petri : \iota \Rightarrow \iota$ be given. Let $u2_petri : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. (v1_relat_1 \\ & X4) \Rightarrow (((r1_xboole_0 X0 X1) \wedge (r1_tarski X4 (k2_xboole_0 (k2_zfmisc_1 \\ & X0 X1) (k2_zfmisc_1 X1 X0)))) \wedge ((k4_tarski X2 X3 \in X4) \wedge (X2 \in X0))) \Rightarrow \\ & ((\neg X2 \in X1) \wedge (\neg X3 \in X0) \wedge (X3 \in X1))) \wedge (((r1_xboole_0 X0 X1) \wedge (r1_tarski \\ & X4 (k2_xboole_0 (k2_zfmisc_1 X0 X1) (k2_zfmisc_1 X1 X0))) \wedge ((k4_tarski \\ & X2 X3 \in X4) \wedge (X3 \in X1))) \Rightarrow ((\neg X3 \in X0) \wedge (\neg X2 \in X1) \wedge (X2 \in X0))) \wedge (((\\ & r1_xboole_0 X0 X1) \wedge (r1_tarski X4 (k2_xboole_0 (k2_zfmisc_1 X0 \\ & X1) (k2_zfmisc_1 X1 X0))) \wedge ((k4_tarski X2 X3 \in X4) \wedge (X2 \in X1))) \Rightarrow (\\ & (\neg X2 \in X0) \wedge (\neg X3 \in X1) \wedge (X3 \in X0))) \wedge (((r1_xboole_0 X0 X1) \wedge (r1_tarski \\ & X4 (k2_xboole_0 (k2_zfmisc_1 X0 X1) (k2_zfmisc_1 X1 X0))) \wedge ((k4_tarski \\ & X2 X3 \in X4) \wedge (X3 \in X0))) \Rightarrow ((\neg X2 \in X0) \wedge (\neg X3 \in X1) \wedge (X2 \in X1)))))) \\ & \tag{1} \end{aligned}$$

Assume the following.

$$\forall X0. (l1_petri X0) \Rightarrow (v1_relat_1 (k1_net_1 X0)) \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. (l1_petri X0) \Rightarrow ((v1_net_1 X0) \Leftrightarrow ((r1_xboole_0 (u1_struct_0 \\ & X0) (u4_struct_0 X0)) \wedge (r1_tarski (k1_net_1 X0) (k2_xboole_0 (\\ & k2_zfmisc_1 (u1_struct_0 X0) (u4_struct_0 X0)) (k2_zfmisc_1 (\\ & u4_struct_0 X0) (u1_struct_0 X0)))))) \\ & \tag{3} \end{aligned}$$

Assume the following.

$$\forall X0. (l1_petri X0) \Rightarrow (k1_net_1 X0 = k2_xboole_0 (u1_petri X0) (u2_petri X0)) \tag{4}$$

Theorem 1

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1_net_1 X2) \wedge (l1_petri X2)) \Rightarrow \\ & (((k4_tarski X0 X1 \in k1_net_1 X2) \wedge (X0 \in u4_struct_0 X2)) \Rightarrow ((\neg X0 \in \\ & u1_struct_0 X2) \wedge ((\neg X1 \in u4_struct_0 X2) \wedge (X1 \in u1_struct_0 X2)))) \wedge \\ & (((k4_tarski X0 X1 \in k1_net_1 X2) \wedge (X1 \in u4_struct_0 X2)) \Rightarrow ((\neg X1 \in \\ & u1_struct_0 X2) \wedge ((\neg X0 \in u4_struct_0 X2) \wedge (X0 \in u1_struct_0 X2)))) \wedge \\ & (((k4_tarski X0 X1 \in k1_net_1 X2) \wedge (X0 \in u1_struct_0 X2)) \Rightarrow ((\neg X1 \in \\ & u1_struct_0 X2) \wedge ((\neg X0 \in u4_struct_0 X2) \wedge (X1 \in u4_struct_0 X2)))) \wedge \\ & (((k4_tarski X0 X1 \in k1_net_1 X2) \wedge (X1 \in u1_struct_0 X2)) \Rightarrow ((\neg X0 \in \\ & u1_struct_0 X2) \wedge ((\neg X1 \in u4_struct_0 X2) \wedge (X0 \in u4_struct_0 X2)))))) \end{aligned}$$