

t8\_net\_1  
(TMckb5Y75kpqQ5Seai9qwTzK8htFumSvskJ)

October 27, 2020

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  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $u4\_struct\_0 : \iota \Rightarrow \iota$  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. 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.

$$\begin{aligned} & \forall X0. (l1\_petri X0) \Rightarrow ((v1\_net\_1 X0) \Leftrightarrow ((r1\_xboole\_0 (u1\_struct\_0 \\ & X0) (u4\_struct\_0 X0)) \wedge (r1\_tarski (k1\_net\_1 X0) (k2\_xboole\_0 ( \\ & k2\_zfmisc\_1 (u1\_struct\_0 X0) (u4\_struct\_0 X0)) (k2\_zfmisc\_1 ( \\ & u4\_struct\_0 X0) (u1\_struct\_0 X0)))))) \\ & \tag{3} \end{aligned}$$

**Theorem 1**

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1\_net\_1 X2) \wedge (l1\_petri X2)) \Rightarrow \\ & (((k4\_tarski X0 X1 \in k1\_net\_1 X2) \wedge (X1 \in u1\_struct\_0 X2)) \Rightarrow (X0 \in u4\_struct\_0 \\ & X2)) \end{aligned}$$