

t15_cohsp_1
(TMPoSitgAG7mg9oJnzJ4pEvBVMW1yBJbv85)

October 27, 2020

Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $r1_cohsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_cohsp_1 : \iota \Rightarrow o$ be given. Let $v2_cohsp_1 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow ((\forall X1. \forall X2. \neg (X1 \in X0) \wedge \\ & ((X2 \in X0) \wedge (\forall X3. \neg (r1_tarski X3 (k3_xboole_0 X1 X2)) \wedge (X3 \in \\ & X0)))) \Rightarrow (v2_cohsp_1 X0)) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow ((\forall X1. \forall X2. \neg (X1 \in X0) \wedge \\ & ((X2 \in X0) \wedge (\forall X3. \neg (r1_tarski (k2_xboole_0 X1 X2) X3) \wedge (X3 \in \\ & X0)))) \Rightarrow (v1_cohsp_1 X0)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (r1_cohsp_1 X0 X1) \Leftrightarrow (\forall X2. \forall X3. \\ & ((X2 \in X1) \wedge (X3 \in X1)) \Rightarrow ((k3_xboole_0 X2 X3 \in X0) \wedge (k2_xboole_0 X2 X3 \in \\ & X0))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (r1_tarski X0 X1) \Leftrightarrow (\forall X2. (X2 \in X0) \Rightarrow \\ & (X2 \in X1)) \end{aligned} \quad (4)$$

Theorem 1

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow ((r1_cohsp_1 X0 X0) \Rightarrow ((v1_cohsp_1 \\ & X0) \wedge (v2_cohsp_1 X0))) \end{aligned}$$