

t19_partit1
(TMc7CB9uVCwjicDAHntXbANbWbySjEfsKc2)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_eqrel_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_partit1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_setfam_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. \forall X2. \forall X3. \\ & \quad \forall X4. (m1_eqrel_1 X4 X0) \Rightarrow (\forall X5. (m1_eqrel_1 X5 X0) \Rightarrow \\ & \quad (((r1_setfam_1 X4 X5) \wedge ((X1 \in X5) \wedge ((X2 \in X4) \wedge ((X3 \in X1) \wedge (X3 \in X2)))))) \Rightarrow \\ & \quad (r1_tarski X2 X1)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (m1_eqrel_1 X1 X0) \Rightarrow \\ & \quad (\forall X2. (m1_eqrel_1 X2 X0) \Rightarrow (r1_setfam_1 X1 (k3_partit1 X0 \\ & \quad X1 X2)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 X0) \wedge ((m1_eqrel_1 \\ & \quad X1 X0) \wedge (m1_eqrel_1 X2 X0))) \Rightarrow (m1_eqrel_1 (k3_partit1 X0 X1 X2) X0) \end{aligned} \tag{3}$$

Theorem 1

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. \forall X2. \forall X3. \\ & \quad \forall X4. (m1_eqrel_1 X4 X0) \Rightarrow (\forall X5. (m1_eqrel_1 X5 X0) \Rightarrow \\ & \quad (((X1 \in k3_partit1 X0 X4 X5) \wedge ((X2 \in X4) \wedge ((X3 \in X1) \wedge (X3 \in X2)))))) \Rightarrow (r1_tarski \\ & \quad X2 X1)))) \end{aligned}$$