

t37_partit1 (TMFQVvt- GDVfGFj54AuN2bh7APrAasKfbFZR)

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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 $k10_eqrel_1 : \iota \Rightarrow \iota$ be given. Let $k2_partit1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_setfam_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_partit1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_eqrel_1 X1 X0) \Rightarrow \\ (\forall X2.(m1_eqrel_1 X2 X0) \Rightarrow (((r1_setfam_1 X2 X1) \wedge (r1_setfam_1 \\ X1 X2)) \Rightarrow (X1 = X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_eqrel_1 X1 X0) \Rightarrow \\ ((r1_setfam_1 X1 (k6_partit1 X0)) \wedge (r1_setfam_1 (k10_eqrel_1 \\ X0) X1))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_eqrel_1 X1 X0) \Rightarrow \\ (\forall X2.(m1_eqrel_1 X2 X0) \Rightarrow (k3_partit1 X0 X1 (k2_partit1 X0 \\ X1 X2) = X1))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_eqrel_1 X1 X0) \Rightarrow \\ (\forall X2.(m1_eqrel_1 X2 X0) \Rightarrow (r1_setfam_1 (k2_partit1 X0 X1 \\ X2) X1))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0) \wedge ((m1_eqrel_1 \\ X1 X0) \wedge (m1_eqrel_1 X2 X0))) \Rightarrow (m1_eqrel_1 (k2_partit1 X0 X1 X2) X0) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.m1_eqrel_1 (k10_eqrel_1 X0) X0 \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge((m1_eqrel_1 X1 X0)\wedge(m1_eqrel_1 X2 X0)))\Rightarrow(k3_partit1 X0 X1 X2 = k3_partit1 X0 X2 X1)$$
(7)

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge((m1_eqrel_1 X1 X0)\wedge(m1_eqrel_1 X2 X0)))\Rightarrow(k2_partit1 X0 X1 X2 = k2_partit1 X0 X2 X1)$$
(8)

Theorem 1

$$\forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.(m1_eqrel_1 X1 X0)\Rightarrow((k3_partit1 X0 (k10_eqrel_1 X0) X1 = X1)\wedge(k2_partit1 X0 (k10_eqrel_1 X0) X1 = k10_eqrel_1 X0)))$$