

t28_partit1

(TMd4coTozkrZeTwLsNrpfbAafVVmF8urEc2)

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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 $k2_partit1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_partit1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_eqrel_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_eqrel_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_relat_2 : \iota \Rightarrow o$ be given. Let $v8_relat_2 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_eqrel_1 X1 X0) \Rightarrow \\ (\forall X2.(m1_eqrel_1 X2 X0) \Rightarrow ((k4_partit1 X0 X1 = k4_partit1 \\ X0 X2) \Rightarrow (X1 = X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_eqrel_1 X1 X0) \Rightarrow \\ (\forall X2.(m1_eqrel_1 X2 X0) \Rightarrow (k4_partit1 X0 (k2_partit1 X0 X1 \\ X2) = k4_eqrel_1 X0 (k4_partit1 X0 X1) (k4_partit1 X0 X2)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_eqrel_1 X1 X0) \Rightarrow \\ (\forall X2.(m1_eqrel_1 X2 X0) \Rightarrow (k4_partit1 X0 (k3_partit1 X0 X1 \\ X2) = k5_eqrel_1 X0 (k4_partit1 X0 X1) (k4_partit1 X0 X2)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v3_relat_2 X1) \wedge ((v8_relat_2 X1) \wedge ((v1_partfun1 \\ X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))))) \Rightarrow \\ (\forall X2.((v3_relat_2 X2) \wedge ((v8_relat_2 X2) \wedge ((v1_partfun1 \\ X2 X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))))) \Rightarrow \\ (r2_relset_1 X0 X0 (k5_eqrel_1 X0 X1 (k4_eqrel_1 X0 X1 X2)) X1)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.\forall X3.((m1_subset_1 X2 \\ (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\ (k2_zfmisc_1 X0 X1)))) \Rightarrow ((r2_relset_1 X0 X1 X2 X3) \Leftrightarrow (X2 = X3)) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge(m1_eqrel_1 X1 X0))\Rightarrow \\ & ((v1_partfun1 (k4_partit1 X0 X1) X0)\wedge((v3_relat_2 (k4_partit1 \\ & X0 X1))\wedge((v8_relat_2 (k4_partit1 X0 X1))\wedge(m1_subset_1 (k4_partit1 \\ & X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge((m1_eqrel_1 \\ & X1 X0)\wedge(m1_eqrel_1 X2 X0)))\Rightarrow(m1_eqrel_1 (k3_partit1 X0 X1 X2) X0) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge((m1_eqrel_1 \\ & X1 X0)\wedge(m1_eqrel_1 X2 X0)))\Rightarrow(m1_eqrel_1 (k2_partit1 X0 X1 X2) X0) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge((m1_eqrel_1 \\ & X1 X0)\wedge(m1_eqrel_1 X2 X0)))\Rightarrow(k3_partit1 X0 X1 X2 = k3_partit1 X0 \\ & X2 X1) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge((m1_eqrel_1 \\ & X1 X0)\wedge(m1_eqrel_1 X2 X0)))\Rightarrow(k2_partit1 X0 X1 X2 = k2_partit1 X0 \\ & X2 X1) \end{aligned} \quad (10)$$

Theorem 1

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