

t2_partit_2
(TMW6dRRmfx2Sjspo25Z7bhXfxALttScnrLb)

October 27, 2020

Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_relat_2 : \iota \Rightarrow o$ be given. Let $v8_relat_2 : \iota \Rightarrow o$ 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 $r1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_eqrel_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_2 : \iota \Rightarrow o$ be given. Let $k4_tarSKI : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1_relat_2 X2) \wedge ((v1_partfun1 \\ & X2 X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))))) \Rightarrow (\\ & (X1 \in X0) \Rightarrow (k4_tarSKI X1 X1 \in X2)) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. \forall X5. \\ & ((m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \wedge (m1_subset_1 \\ & X5 (k1_zfmisc_1 (k2_zfmisc_1 X2 X3)))) \Rightarrow (k4_relset_1 X0 X1 X2 X3 \\ & X4 X5 = k3_relat_1 X4 X5) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((m1_subset_1 X1 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X0))) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X0)))) \Rightarrow (k3_eqrel_1 X0 X1 X2 = k2_xboole_0 X1 X2) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. v1_relat_1 (k3_relat_1 X0 X1) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((m1_subset_1 X1 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X0))) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X0)))) \Rightarrow (m1_subset_1 (k3_eqrel_1 X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X0))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (v1_relat_1 X2) \Rightarrow ((X2 = k3_relat_1 \\ & X0 X1) \Leftrightarrow (\forall X3. \forall X4. (k4_tarski X3 X4 \in X2) \Leftrightarrow (\exists X5. \\ & (k4_tarski X3 X5 \in X0) \wedge (k4_tarski X5 X4 \in X1)))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (X2 = k2_xboole_0 X0 X1) \Leftrightarrow (\forall X3. \\ & (X3 \in X2) \Leftrightarrow ((X3 \in X0) \vee (X3 \in X1))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))) \Rightarrow (\forall X3. (r1_relset_1 X0 X1 X2 X3) \Leftrightarrow (\forall X4. \\ & (m1_subset_1 X4 X0) \Rightarrow (\forall X5. (m1_subset_1 X5 X1) \Rightarrow ((k4_tarski \\ & X4 X5 \in X2) \Rightarrow (k4_tarski X4 X5 \in X3)))))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_relat_1 X0) \wedge ((v3_relat_2 X0) \wedge (v8_relat_2 X0))) \Rightarrow \\ & ((v1_relat_1 X0) \wedge (v1_relat_2 X0)) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \end{aligned} \quad (11)$$

Theorem 1

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((v1_partfun1 X1 X0) \wedge \\ & ((v3_relat_2 X1) \wedge ((v8_relat_2 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X0)))))) \Rightarrow (\forall X2. ((v1_partfun1 X2 X0) \wedge ((\\ & v3_relat_2 X2) \wedge ((v8_relat_2 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X0)))))) \Rightarrow (r1_relset_1 X0 X0 (k3_eqrel_1 X0 X1 X2) \\ & (k4_relset_1 X0 X0 X0 X0 X1 X2)))) \end{aligned}$$