

t13_partfun2

(TMPW7M3V6FGSXV222s8gwe85J2rYmcsGyxD)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v2_funct_1 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_partfun2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_funct_1 : \iota \Rightarrow \iota$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1_funct_1 X2) \wedge (m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \Rightarrow ((v2_funct_1 X2) \Rightarrow ((v1_funct_1 \\ & (k2_funct_1 X2)) \wedge (m1_subset_1 (k2_funct_1 X2) (k1_zfmisc_1 (\\ & k2_zfmisc_1 X1 X0)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (\neg v1_xboole_0 X1) \Rightarrow \\ & (\forall X2. (\neg v1_xboole_0 X2) \Rightarrow (\forall X3. (m1_subset_1 X3 X0) \Rightarrow \\ & (\forall X4. ((v1_funct_1 X4) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1)))) \Rightarrow (\forall X5. ((v1_funct_1 X5) \wedge (m1_subset_1 X5 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X1 X2)))) \Rightarrow (((X3 \in k1_relset_1 X0 X4) \wedge (k7_partfun1 \\ & X1 X4 X3 \in k1_relset_1 X1 X5)) \Rightarrow (k7_partfun1 X2 (k1_partfun1 X0 X1 \\ & X1 X2 X4 X5) X3 = k7_partfun1 X2 X5 (k7_partfun1 X1 X4 X3))))))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (\neg v1_xboole_0 X1) \Rightarrow (\forall X2. (\neg v1_xboole_0 \\ & X2) \Rightarrow (\forall X3. ((v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X2 X1)))) \Rightarrow ((X0 \in k2_relset_1 X1 X3) \Leftrightarrow (\exists X4. (\\ & m1_subset_1 X4 X2) \wedge ((X4 \in k1_relset_1 X2 X3) \wedge (X0 = k7_partfun1 X1 \\ & X3 X4)))))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(\neg v1_xboole_0 X1) \Rightarrow \\
& (\forall X2.(m1_subset_1 X2 X0) \Rightarrow (\forall X3.((v1_funct_1 X3) \wedge \\
& ((v2_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 \\
& X1)))))) \Rightarrow ((X2 \in k1_relset_1 X0 X3) \Rightarrow ((X2 = k7_partfun1 X0 (k2_partfun2 \\
& X0 X1 X3) (k7_partfun1 X1 X3 X2)) \wedge (X2 = k7_partfun1 X0 (k1_partfun1 \\
& X0 X1 X1 X0 X3 (k2_partfun2 X0 X1 X3)) X2))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(\neg v1_xboole_0 X1) \Rightarrow \\
& (\forall X2.((v1_funct_1 X2) \wedge ((v2_funct_1 X2) \wedge (m1_subset_1 \\
& X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow (\forall X3.((v1_funct_1 \\
& X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X1 X0)))) \Rightarrow ((r2_relset_1 \\
& X1 X0 X3 (k2_partfun2 X0 X1 X2)) \Leftrightarrow ((k1_relset_1 X1 X3 = k2_relset_1 \\
& X1 X2) \wedge (\forall X4.(m1_subset_1 X4 X1) \Rightarrow (\forall X5.(m1_subset_1 \\
& X5 X0) \Rightarrow (((X4 \in k2_relset_1 X1 X2) \wedge (X5 = k7_partfun1 X0 X3 X4)) \Rightarrow (\\
& (X5 \in k1_relset_1 X0 X2) \wedge (X4 = k7_partfun1 X1 X2 X5))) \wedge (((X5 \in k1_relset_1 \\
& X0 X2) \wedge (X4 = k7_partfun1 X1 X2 X5)) \Rightarrow ((X4 \in k2_relset_1 X1 X2) \wedge (X5 = \\
& k7_partfun1 X0 X3 X4))))))))))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.((m1_subset_1 X2 \\
& (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\
& (k2_zfmisc_1 X0 X1)))) \Rightarrow (r2_relset_1 X0 X1 X2 X2)
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.((v1_funct_1 X2) \wedge ((v2_funct_1 \\
& X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow (k2_partfun2 \\
& X0 X1 X2 = k2_funct_1 X2)
\end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.((v1_funct_1 X2) \wedge ((v2_funct_1 \\
& X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow ((v1_funct_1 \\
& (k2_partfun2 X0 X1 X2)) \wedge (m1_subset_1 (k2_partfun2 X0 X1 X2) (k1_zfmisc_1 \\
& (k2_zfmisc_1 X1 X0))))
\end{aligned} \tag{8}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(\neg v1_xboole_0 X1) \Rightarrow \\
& (\forall X2.(m1_subset_1 X2 X1) \Rightarrow (\forall X3.((v1_funct_1 X3) \wedge \\
& ((v2_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 \\
& X1)))))) \Rightarrow ((X2 \in k2_relset_1 X1 X3) \Rightarrow ((X2 = k7_partfun1 X1 X3 (k7_partfun1 \\
& X0 (k2_partfun2 X0 X1 X3) X2)) \wedge (X2 = k7_partfun1 X1 (k1_partfun1 \\
& X1 X0 X0 X1 (k2_partfun2 X0 X1 X3) X3) X2))))))
\end{aligned}$$