

t5_partfun2 (TMRwBwGfoW- PRKrt7eWfXzwLrVKu9X6HezFo)

October 27, 2020

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 $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(\neg v1_xboole_0 X1) \Rightarrow \\
 & (\forall X2.(\neg v1_xboole_0 X2) \Rightarrow (\forall X3.(m1_subset_1 X3 X0) \Rightarrow \\
 & (\forall X4.((v1_funct_1 X4) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 \\
 & X0 X1)))) \Rightarrow (\forall X5.((v1_funct_1 X5) \wedge (m1_subset_1 X5 (k1_zfmisc_1 \\
 & (k2_zfmisc_1 X1 X2)))) \Rightarrow (((X3 \in k1_relset_1 X0 X4) \wedge (k7_partfun1 \\
 & X1 X4 X3 \in k1_relset_1 X1 X5)) \Rightarrow (k7_partfun1 X2 (k1_partfun1 X0 X1 \\
 & X1 X2 X4 X5) X3 = k7_partfun1 X2 X5 (k7_partfun1 X1 X4 X3))))))))) \\
 & \tag{1}
 \end{aligned}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.\forall X1.(\neg v1_xboole_0 X1) \Rightarrow (\forall X2.(\neg v1_xboole_0 \\
 & X2) \Rightarrow (\forall X3.((v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\
 & (k2_zfmisc_1 X2 X1)))) \Rightarrow ((X0 \in k2_relset_1 X1 X3) \Leftrightarrow (\exists X4.(\\
 & m1_subset_1 X4 X2) \wedge ((X4 \in k1_relset_1 X2 X3) \wedge (X0 = k7_partfun1 X1 \\
 & X3 X4)))))) \\
 & \tag{2}
 \end{aligned}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.\forall X1.(r1_tarski X0 X1) \Leftrightarrow (\forall X2.(X2 \in X0) \Rightarrow \\
 & (X2 \in X1)) \\
 & \tag{3}
 \end{aligned}$$

Theorem 1

$$\begin{aligned}
 & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(\neg v1_xboole_0 X1) \Rightarrow \\
 & (\forall X2.(\neg v1_xboole_0 X2) \Rightarrow (\forall X3.(m1_subset_1 X3 X0) \Rightarrow \\
 & (\forall X4.((v1_funct_1 X4) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 \\
 & X0 X1)))) \Rightarrow (\forall X5.((v1_funct_1 X5) \wedge (m1_subset_1 X5 (k1_zfmisc_1 \\
 & (k2_zfmisc_1 X1 X2)))) \Rightarrow (((r1_tarski (k2_relset_1 X1 X4) (k1_relset_1 \\
 & X1 X5)) \wedge (X3 \in k1_relset_1 X0 X4)) \Rightarrow (k7_partfun1 X2 (k1_partfun1 \\
 & X0 X1 X1 X2 X4 X5) X3 = k7_partfun1 X2 X5 (k7_partfun1 X1 X4 X3))))))))) \\
 & \tag{4}
 \end{aligned}$$