

t2_multop_1 (TMKnaHrC- cEqe68JseMQdyUycqmKRnuk3KeS)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xtuple_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. \forall X2. \forall X3. \\ & \quad \forall X4. ((v1_funct_1 X4) \wedge ((v1_funct_2 X4 (k3_zfmisc_1 X1 X2 \\ & \quad X3) X0) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 (k3_zfmisc_1 \\ & \quad X1 X2 X3) X0)))))) \Rightarrow (\forall X5. ((v1_funct_1 X5) \wedge ((v1_funct_2 X5 \\ & \quad (k3_zfmisc_1 X1 X2 X3) X0) \wedge (m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 \\ & \quad (k3_zfmisc_1 X1 X2 X3) X0)))))) \Rightarrow ((\forall X6. \forall X7. \forall X8. \\ & \quad ((X6 \in X1) \wedge ((X7 \in X2) \wedge (X8 \in X3))) \Rightarrow (k1_funct_1 X4 (k3_xtuple_0 X6 \\ & \quad X7 X8) = k1_funct_1 X5 (k3_xtuple_0 X6 X7 X8))) \Rightarrow (r2_funct_2 (k3_zfmisc_1 \\ & \quad X1 X2 X3) X0 X4 X5))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. \forall X5. \\ & \quad ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge ((\neg v1_xboole_0 X2) \wedge (\\ & \quad (m1_subset_1 X3 X0) \wedge ((m1_subset_1 X4 X1) \wedge (m1_subset_1 X5 X2)))))) \Rightarrow \\ & \quad (k4_domain_1 X0 X1 X2 X3 X4 X5 = k3_xtuple_0 X3 X4 X5) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1_xboole_0 X0) \wedge \\ & \quad (((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ & \quad (k2_zfmisc_1 X0 X1)))))) \wedge (m1_subset_1 X3 X0))) \Rightarrow (k3_funct_2 X0 \\ & \quad X1 X2 X3 = k1_funct_1 X2 X3) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge((\neg v1_xboole_0 X1)\wedge(\neg v1_xboole_0 X2)))\Rightarrow(\neg v1_xboole_0 (k3_zfmisc_1 X0 X1 X2)) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\ & ((\neg v1_xboole_0 X0)\wedge((\neg v1_xboole_0 X1)\wedge((\neg v1_xboole_0 X2)\wedge \\ & (m1_subset_1 X3 X0)\wedge((m1_subset_1 X4 X1)\wedge(m1_subset_1 X5 X2))))))\Rightarrow \\ & (m1_subset_1 (k4_domain_1 X0 X1 X2 X3 X4 X5) (k3_zfmisc_1 X0 X1 X2)) \end{aligned} \quad (6)$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.(\neg v1_xboole_0 X1)\Rightarrow \\ & (\forall X2.(\neg v1_xboole_0 X2)\Rightarrow(\forall X3.(\neg v1_xboole_0 X3)\Rightarrow \\ & (\forall X4.((v1_funct_1 X4)\wedge((v1_funct_2 X4 (k3_zfmisc_1 X0 \\ & X1 X2) X3)\wedge(m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 (k3_zfmisc_1 \\ & X0 X1 X2) X3))))))\Rightarrow(\forall X5.((v1_funct_1 X5)\wedge((v1_funct_2 X5 \\ & (k3_zfmisc_1 X0 X1 X2) X3)\wedge(m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (k3_zfmisc_1 X0 X1 X2) X3))))))\Rightarrow((\forall X6.(m1_subset_1 X6 X0)\Rightarrow \\ & (\forall X7.(m1_subset_1 X7 X1)\Rightarrow(\forall X8.(m1_subset_1 X8 X2)\Rightarrow \\ & (k3_funct_2 (k3_zfmisc_1 X0 X1 X2) X3 X4 (k4_domain_1 X0 X1 X2 X6 X7 \\ & X8) = k3_funct_2 (k3_zfmisc_1 X0 X1 X2) X3 X5 (k4_domain_1 X0 X1 X2 \\ & X6 X7 X8))))))\Rightarrow(r2_funct_2 (k3_zfmisc_1 X0 X1 X2) X3 X4 X5)))))) \end{aligned}$$