

t102_funct_2 (TMR-
BCbX2KyvBoKS4Kw9iwkrWTtutGxwuETV)

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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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1_xboole_0 X0) \wedge \\ & ((\neg v1_xboole_0 X1) \wedge ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \wedge (m1_subset_1 \\ & X3 (k1_zfmisc_1 (k1_zfmisc_1 X1)))))) \Rightarrow (m1_subset_1 (k6_funct_2 \\ & X0 X1 X2 X3) (k1_zfmisc_1 (k1_zfmisc_1 X0))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (\neg v1_xboole_0 X1) \Rightarrow \\ & (\forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow (\forall X3. (m1_subset_1 \\ & X3 (k1_zfmisc_1 (k1_zfmisc_1 X1))) \Rightarrow (\forall X4. (m1_subset_1 \\ & X4 (k1_zfmisc_1 (k1_zfmisc_1 X0))) \Rightarrow ((X4 = k6_funct_2 X0 X1 X2 X3) \Leftrightarrow \\ & (\forall X5. (m1_subset_1 X5 (k1_zfmisc_1 X0)) \Rightarrow ((X5 \in X4) \Leftrightarrow (\exists X6. \\ & (m1_subset_1 X6 (k1_zfmisc_1 X1)) \wedge ((X6 \in X3) \wedge (X5 = k8_relset_1 \\ & X0 X1 X2 X6)))))))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (r1_tarski X0 X1) \Leftrightarrow (\forall X2. (X2 \in X0) \Rightarrow (X2 \in X1)) \quad (4)$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(\neg v1_xboole_0 X1) \Rightarrow \\ & (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow (\forall X3.(m1_subset_1 \\ & X3 (k1_zfmisc_1 (k1_zfmisc_1 X1))) \Rightarrow (\forall X4.(m1_subset_1 \\ & X4 (k1_zfmisc_1 (k1_zfmisc_1 X1))) \Rightarrow ((r1_tarski X3 X4) \Rightarrow (r1_tarski \\ & (k6_funct_2 X0 X1 X2 X3) (k6_funct_2 X0 X1 X2 X4)))))) \end{aligned}$$