

t9_binop_1 (TMd-
VPcF63X3Hk2LYE1e96fy9PCFgXKGrC8U)

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Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $r1_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1_subset_1 X1 X0) \Rightarrow (\forall X2. ((v1_funct_1 \\ & X2) \wedge ((v1_funct_2 X2 (k2_zfmisc_1 X0 X0) X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (k2_zfmisc_1 X0 X0) X0)))))) \Rightarrow ((r2_binop_1 X0 X1 X2) \Leftrightarrow \\ & (\forall X3. (m1_subset_1 X3 X0) \Rightarrow (k3_binop_1 X0 X2 X3 X1 = X3)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1_subset_1 X1 X0) \Rightarrow (\forall X2. ((v1_funct_1 \\ & X2) \wedge ((v1_funct_2 X2 (k2_zfmisc_1 X0 X0) X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (k2_zfmisc_1 X0 X0) X0)))))) \Rightarrow ((r1_binop_1 X0 X1 X2) \Leftrightarrow \\ & (\forall X3. (m1_subset_1 X3 X0) \Rightarrow (k3_binop_1 X0 X2 X1 X3 = X3)))) \end{aligned} \quad (2)$$

Theorem 1

$$\begin{aligned} & \forall X0. \forall X1. ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (k2_zfmisc_1 \\ & X0 X0) X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 \\ & X0 X0) X0)))))) \Rightarrow (\forall X2. (m1_subset_1 X2 X0) \Rightarrow (\forall X3. (m1_subset_1 \\ & X3 X0) \Rightarrow (((r1_binop_1 X0 X2 X1) \wedge (r2_binop_1 X0 X3 X1)) \Rightarrow (X2 = X3)))) \end{aligned}$$