

t2_binop_1

(TMZdqV6E4gW8YXAH3xqVw1dRWLmiBWBTAk5)

October 27, 2020

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 $k1_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((v1_funct_1 X3) \wedge \\ & ((v1_funct_2 X3 (k2_zfmisc_1 X0 X1) X2) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (k2_zfmisc_1 X0 X1) X2)))) \Rightarrow (\forall X4. ((v1_funct_1 \\ & X4) \wedge ((v1_funct_2 X4 (k2_zfmisc_1 X0 X1) X2) \wedge (m1_subset_1 X4 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (k2_zfmisc_1 X0 X1) X2)))) \Rightarrow ((\forall X5. \forall X6. \\ & ((X5 \in X0) \wedge (X6 \in X1)) \Rightarrow (k1_binop_1 X3 X5 X6 = k1_binop_1 X4 X5 X6)) \Rightarrow \\ & (r2_funct_2 (k2_zfmisc_1 X0 X1) X2 X3 X4))) \end{aligned} \quad (2)$$

Theorem 1

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((v1_funct_1 X3) \wedge \\ & ((v1_funct_2 X3 (k2_zfmisc_1 X0 X1) X2) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (k2_zfmisc_1 X0 X1) X2)))) \Rightarrow (\forall X4. ((v1_funct_1 \\ & X4) \wedge ((v1_funct_2 X4 (k2_zfmisc_1 X0 X1) X2) \wedge (m1_subset_1 X4 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (k2_zfmisc_1 X0 X1) X2)))) \Rightarrow ((\forall X5. (m1_subset_1 \\ & X5 X0) \Rightarrow (\forall X6. (m1_subset_1 X6 X1) \Rightarrow (k1_binop_1 X3 X5 X6 = k1_binop_1 \\ & X4 X5 X6)) \Rightarrow (r2_funct_2 (k2_zfmisc_1 X0 X1) X2 X3 X4))) \end{aligned}$$