

t44_functor0 (TMcRJo- HwrfD9KnRrAiGmFu5Y5BbMA7KBdqH)

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Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $l1_functor0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v10_functor0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_functor0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7_functor0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $v2_funct_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k16_funct_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_partfun1 : \iota \Rightarrow \iota$ be given. Let $k7_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r8_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_functor0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_functor0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 \\ & X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow \\ & ((v2_funct_2 X2 X1) \Leftrightarrow (v2_funct_2 (k16_funct_3 X0 X0 X1 X1 X2 X2) (\\ & k2_zfmisc_1 X1 X1))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 \\ & X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow \\ & ((v2_funct_2 X2 X1) \Rightarrow (r1_relset_1 X1 X1 (k6_partfun1 X1) (k7_relset_1 \\ & (k2_zfmisc_1 X0 X0) (k2_zfmisc_1 X1 X1) (k16_funct_3 X0 X0 X1 X1 X2 \\ & X2) (k6_partfun1 X0)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. (((v1_funct_1 \\ & X3) \wedge ((v1_funct_2 X3 (k2_zfmisc_1 X0 X1) X2) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (k2_zfmisc_1 X0 X1) X2)))))) \wedge ((v1_funct_1 X4) \wedge ((\\ & v1_funct_2 X4 (k2_zfmisc_1 X0 X1) X2) \wedge (m1_subset_1 X4 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (k2_zfmisc_1 X0 X1) X2)))))) \Rightarrow ((r8_binop_1 X0 X1 X2 \\ & X3 X4) \Leftrightarrow (X3 = X4)) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((l1_struct_0 X0)\wedge((l1_struct_0 \\ & X1)\wedge(l1_functor0 X2 X0 X1)))\Rightarrow((v1_funct_1 (u1_functor0 X0 X1 X2))\wedge \\ & ((v1_funct_2 (u1_functor0 X0 X1 X2) (k2_zfmisc_1 (u1_struct_0 \\ & X0) (u1_struct_0 X0)) (k2_zfmisc_1 (u1_struct_0 X1) (u1_struct_0 \\ & X1)))\wedge(m1_subset_1 (u1_functor0 X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 \\ & (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)) (k2_zfmisc_1 \\ & (u1_struct_0 X1) (u1_struct_0 X1))))))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\ & (((v1_funct_1 X4)\wedge((v1_funct_2 X4 X0 X2)\wedge(m1_subset_1 X4 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X2))))))\wedge((v1_funct_1 X5)\wedge((v1_funct_2 X5 X1 X3)\wedge \\ & (m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 X1 X3))))))\Rightarrow((v1_funct_1 \\ & (k16_funct_3 X0 X1 X2 X3 X4 X5))\wedge((v1_funct_2 (k16_funct_3 X0 X1 \\ & X2 X3 X4 X5) (k2_zfmisc_1 X0 X1) (k2_zfmisc_1 X2 X3))\wedge(m1_subset_1 \\ & (k16_funct_3 X0 X1 X2 X3 X4 X5) (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1) (k2_zfmisc_1 X2 X3))))))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1_struct_0 X0)\Rightarrow(\forall X1.(l1_struct_0 X1)\Rightarrow(\forall X2. \\ & (l1_functor0 X2 X0 X1)\Rightarrow((v7_functor0 X2 X0 X1)\Leftrightarrow(r1_reset_1 (u1_struct_0 \\ & X1) (u1_struct_0 X1) (k6_partfun1 (u1_struct_0 X1)) (k7_reset_1 \\ & (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)) (k2_zfmisc_1 \\ & (u1_struct_0 X1) (u1_struct_0 X1)) (u1_functor0 X0 X1 X2) (k6_partfun1 \\ & (u1_struct_0 X0))))))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1_struct_0 X0)\Rightarrow(\forall X1.(l1_struct_0 X1)\Rightarrow(\forall X2. \\ & (l1_functor0 X2 X0 X1)\Rightarrow((v5_functor0 X2 X0 X1)\Leftrightarrow(v2_funct_2 (u1_functor0 \\ & X0 X1 X2) (k2_zfmisc_1 (u1_struct_0 X1) (u1_struct_0 X1)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v1_funct_1 X2)\wedge((v1_funct_2 \\ & X2 (k2_zfmisc_1 X0 X0) (k2_zfmisc_1 X1 X1))\wedge(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (k2_zfmisc_1 X0 X0) (k2_zfmisc_1 X1 X1))))))\Rightarrow((v1_functor0 \\ & X2 X0 X1)\Leftrightarrow(\exists X3.((v1_funct_1 X3)\wedge((v1_funct_2 X3 X0 X1)\wedge \\ & (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\wedge(r8_binop_1 \\ & X0 X0 (k2_zfmisc_1 X1 X1) X2 (k16_funct_3 X0 X0 X1 X1 X3 X3)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1_struct_0 X0) \Rightarrow (\forall X1.(l1_struct_0 X1) \Rightarrow (\forall X2. \\ & (l1_functor0 X2 X0 X1) \Rightarrow ((v10_functor0 X2 X0 X1) \Leftrightarrow (v1_functor0 (\\ & \quad u1_functor0 X0 X1 X2) (u1_struct_0 X0) (u1_struct_0 X1)))))) \end{aligned} \quad (9)$$

Theorem 1

$$\begin{aligned} & \forall X0.(l1_struct_0 X0) \Rightarrow (\forall X1.(l1_struct_0 X1) \Rightarrow (\forall X2. \\ & (l1_functor0 X2 X0 X1) \Rightarrow (((v10_functor0 X2 X0 X1) \wedge (v5_functor0 \\ & \quad X2 X0 X1)) \Rightarrow (v7_functor0 X2 X0 X1)))) \end{aligned}$$