t5_functor1 (TMGt-DBt9dPq2SP4zudHaQUTGRJmUy2GBuoQ)

October 27, 2020

Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $l2\_altcat\_1 : \iota \Rightarrow o$ be given. Let $l2\_functor0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v21\_functor0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_functor0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $v1\_msualg\_3 : \iota \Rightarrow o$ be given. Let $u2\_functor0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1\_struct\_0 : \iota \Rightarrow o$ be given. Let $l1\_functor0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $l1\_altcat\_1 : \iota \Rightarrow o$ be given. Let $v5\_functor0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2\_funct\_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4\_functor0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2\_funct\_1 : \iota \Rightarrow o$ be given. Let $v19\_functor0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v20\_functor0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v18\_functor0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v17\_functor0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.((l1\_struct\_0\ X0)\wedge((l1\_struct\_0\ X1)\wedge(l1\_functor0\ X2\ X0\ X1)))\Rightarrow((v1\_funct\_1\ (u1\_functor0\ X0\ X1\ X2))\wedge((v1\_funct\_2\ (u1\_functor0\ X0\ X1\ X2)\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0))\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X1)))\wedge(m1\_subset\_1\ (u1\_functor0\ X0\ X1\ X2)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0))\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X1))))))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.((l1\_altcat\_1\ X0)\wedge(l1\_altcat\_1\ X1))\Rightarrow(\forall X2.(l2\_functor0\ X2\ X0\ X1)\Rightarrow(l1\_functor0\ X2\ X0\ X1)) \tag{2}$$

Assume the following.

$$\forall X0.(l2\_altcat\_1\ X0)\Rightarrow(l1\_altcat\_1\ X0) \tag{3}$$

Assume the following.

$$\forall X0.(l1\_altcat\_1\ X0)\Rightarrow(l1\_struct\_0\ X0) \tag{4}$$

Assume the following.

$$\forall X0.(l1\_struct\_0\ X0)\Rightarrow(\forall X1.(l1\_struct\_0\ X1)\Rightarrow(\forall X2.\ (l1\_functor0\ X2\ X0\ X1)\Rightarrow((v5\_functor0\ X2\ X0\ X1)\Leftrightarrow(v2\_funct\_2\ (u1\_functor0\ X0\ X1\ X2)\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X1))))))) \tag{5}$$

Assume the following.

$$\forall X0.(l1\_struct\_0\ X0)\Rightarrow(\forall X1.(l1\_struct\_0\ X1)\Rightarrow(\forall X2.\ (l1\_functor0\ X2\ X0\ X1)\Rightarrow((v4\_functor0\ X2\ X0\ X1)\Leftrightarrow(v2\_funct\_1\ (u1\_functor0\ X0\ X1\ X2))))) \tag{6}$$

Assume the following.

$$\forall X0.(l1\_altcat\_1\ X0)\Rightarrow(\forall X1.(l1\_altcat\_1\ X1)\Rightarrow(\forall X2.\ (l2\_functor0\ X2\ X0\ X1)\Rightarrow((v21\_functor0\ X2\ X0\ X1)\Leftrightarrow((v19\_functor0\ X2\ X0\ X1)\wedge(v20\_functor0\ X2\ X0\ X1))))) \tag{7}$$

Assume the following.

$$\forall X0.(l1\_altcat\_1\ X0)\Rightarrow(\forall X1.(l1\_altcat\_1\ X1)\Rightarrow(\forall X2.\ (l2\_functor0\ X2\ X0\ X1)\Rightarrow((v20\_functor0\ X2\ X0\ X1)\Leftrightarrow((v18\_functor0\ X2\ X0\ X1)\wedge(v5\_functor0\ X2\ X0\ X1))))) \tag{8}$$

Assume the following.

$$\forall X0.(l1\_altcat\_1\ X0)\Rightarrow(\forall X1.(l1\_altcat\_1\ X1)\Rightarrow(\forall X2.\ (l2\_functor0\ X2\ X0\ X1)\Rightarrow((v19\_functor0\ X2\ X0\ X1)\Leftrightarrow((v4\_functor0\ X2\ X0\ X1)\wedge(v17\_functor0\ X2\ X0\ X1))))) \tag{9}$$

Assume the following.

$$\forall X0.(l1\_altcat\_1\ X0)\Rightarrow(\forall X1.(l1\_altcat\_1\ X1)\Rightarrow(\forall X2.\ (l2\_functor0\ X2\ X0\ X1)\Rightarrow((v17\_functor0\ X2\ X0\ X1)\Leftrightarrow(v1\_msualg\_3\ (u2\_functor0\ X0\ X1\ X2))))) \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow(((v1\_funct\_1\ X2)\wedge((v2\_funct\_1\ X2)\wedge(v2\_funct\_2\ X2\ X1)))\Rightarrow((v1\_funct\_1\ X2)\wedge(v3\_funct\_2\ X2\ X0\ X1))) \tag{11}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l2\_altcat\_1\ X0))\Rightarrow(\forall X1.\ ((\neg v2\_struct\_0\ X1)\wedge(l2\_altcat\_1\ X1))\Rightarrow(\forall X2.(l2\_functor0\ X2\ X0\ X1)\Rightarrow((v21\_functor0\ X2\ X0\ X1)\Rightarrow((v3\_funct\_2\ (u1\_functor0\ X0\ X1\ X2)\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0))\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X1)))\wedge(v1\_msualg\_3\ (u2\_functor0\ X0\ X1\ X2)))))) $$