

t4_functor2

(TMYaDX6H1hU6FsMXDjMpjZZDMPqttYDjbXR)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_altcat_1 : \iota \Rightarrow o$ be given. Let $v12_altcat_1 : \iota \Rightarrow o$ be given. Let $l2_altcat_1 : \iota \Rightarrow o$ be given. Let $m2_functor0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k2_functor2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_functor2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_altcat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_functor0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_functor2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_functor2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_altcat_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (((\neg v2_struct_0 \\ & X0) \wedge ((v2_altcat_1 X0) \wedge ((v12_altcat_1 X0) \wedge (l2_altcat_1 X0)))) \wedge \\ & (((\neg v2_struct_0 X1) \wedge ((v2_altcat_1 X1) \wedge ((v12_altcat_1 X1) \wedge \\ & l2_altcat_1 X1)))) \wedge ((m2_functor0 X2 X0 X1) \wedge (m2_functor0 X3 X0 \\ & X1)))) \Rightarrow (r1_functor2 X0 X1 X2 X2) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. \forall X5. \\ & (((\neg v2_struct_0 X0) \wedge ((v2_altcat_1 X0) \wedge ((v12_altcat_1 X0) \wedge \\ & l2_altcat_1 X0)))) \wedge (((\neg v2_struct_0 X1) \wedge ((v2_altcat_1 X1) \wedge \\ & (v12_altcat_1 X1) \wedge (l2_altcat_1 X1)))) \wedge ((m2_functor0 X2 X0 X1) \wedge \\ & ((m2_functor0 X3 X0 X1) \wedge ((m1_functor2 X4 X0 X1 X2 X3) \wedge (m1_subset_1 \\ & X5 (u1_struct_0 X0)))))) \Rightarrow (m1_subset_1 (k2_functor2 X0 X1 X2 X3 \\ & X4 X5) (k1_altcat_1 X1 (k3_functor0 X0 X1 X2 X5) (k3_functor0 X0 X1 \\ & X3 X5))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge ((v2_altcat_1 \\ & X0) \wedge ((v12_altcat_1 X0) \wedge (l2_altcat_1 X0)))) \wedge (((\neg v2_struct_0 \\ & X1) \wedge ((v2_altcat_1 X1) \wedge ((v12_altcat_1 X1) \wedge (l2_altcat_1 X1)))) \wedge \\ & (m2_functor0 X2 X0 X1))) \Rightarrow (m1_functor2 (k1_functor2 X0 X1 X2) X0 \\ & X1 X2 X2) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_altcat_1 X0) \wedge ((v12_altcat_1 \\
& X0) \wedge (l2_altcat_1 X0)))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v2_altcat_1 \\
& X1) \wedge ((v12_altcat_1 X1) \wedge (l2_altcat_1 X1)))) \Rightarrow (\forall X2.(m2_functor0 \\
& X2 X0 X1) \Rightarrow (\forall X3.(m2_functor0 X3 X0 X1) \Rightarrow ((r1_functor2 X0 X1 \\
& X2 X3) \Rightarrow (\forall X4.(m1_functor2 X4 X0 X1 X2 X3) \Rightarrow (\forall X5.(m1_subset_1 \\
& X5 (u1_struct_0 X0) \Rightarrow (\forall X6.(m1_subset_1 X6 (k1_altcat_1 \\
& X1 (k3_functor0 X0 X1 X2 X5) (k3_functor0 X0 X1 X3 X5))) \Rightarrow ((X6 = k2_functor2 \\
& X0 X1 X2 X3 X4 X5) \Leftrightarrow (X6 = k1_funct_1 X4 X5))))))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_altcat_1 X0) \wedge ((v12_altcat_1 \\
& X0) \wedge (l2_altcat_1 X0)))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v2_altcat_1 \\
& X1) \wedge ((v12_altcat_1 X1) \wedge (l2_altcat_1 X1)))) \Rightarrow (\forall X2.(m2_functor0 \\
& X2 X0 X1) \Rightarrow (\forall X3.(m1_functor2 X3 X0 X1 X2 X2) \Rightarrow ((X3 = k1_functor2 \\
& X0 X1 X2) \Leftrightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0) \Rightarrow (k1_funct_1 \\
& X3 X4 = k8_altcat_1 X1 (k3_functor0 X0 X1 X2 X4))))))
\end{aligned} \tag{5}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_altcat_1 X0) \wedge ((v12_altcat_1 \\
& X0) \wedge (l2_altcat_1 X0)))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v2_altcat_1 \\
& X1) \wedge ((v12_altcat_1 X1) \wedge (l2_altcat_1 X1)))) \Rightarrow (\forall X2.(m2_functor0 \\
& X2 X0 X1) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0) \Rightarrow (k2_functor2 \\
& X0 X1 X2 X2 (k1_functor2 X0 X1 X2) X3 = k8_altcat_1 X1 (k3_functor0 \\
& X0 X1 X2 X3))))
\end{aligned}$$