t37_functor3 (TMbT3mJrkwXuULKBnZk7zQqMm4TT1kHVaBB)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v2\_altcat\_1 : \iota \Rightarrow o$ be given. Let $v11\_altcat\_1 : \iota \Rightarrow o$ be given. Let $v12\_altcat\_1 : \iota \Rightarrow o$ be given. Let $l2\_altcat\_1 : \iota \Rightarrow o$ be given. Let $v15\_functor0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2\_functor0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_functor3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_functor3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_functor3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_functor3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_functor3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_functor3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_functor2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r8\_pboole : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1\_struct\_0 : \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $m2\_functor2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_functor2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1\_altcat\_1 : \iota \Rightarrow o$ be given. Let $v9\_functor0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2\_functor2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_functor2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_functor2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3\_altcat\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_functor2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_functor0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v2\_altcat\_1\ X0) \wedge ((v11\_altcat\_1\ X0) \wedge ((v12\_altcat\_1\ X0) \wedge (l2\_altcat\_1\ X0))))) \Rightarrow (\forall X1.((\neg v2\_struct\_0\ X1) \wedge ((v2\_altcat\_1\ X1) \wedge ((v11\_altcat\_1\ X1) \wedge ((v12\_altcat\_1\ X1) \wedge (l2\_altcat\_1\ X1))))) \Rightarrow (\forall X2.((\neg v2\_struct\_0\ X2) \wedge ((v2\_altcat\_1\ X2) \wedge ((v11\_altcat\_1\ X2) \wedge ((v12\_altcat\_1\ X2) \wedge (l2\_altcat\_1\ X2))))) \Rightarrow (\forall X3.((v15\_functor0\ X3\ X0\ X1) \wedge (m2\_functor0\ X3\ X0\ X1)) \Rightarrow (\forall X4.((v15\_functor0\ X4\ X1\ X2) \wedge (m2\_functor0\ X4\ X1\ X2)) \Rightarrow (\forall X5.((v15\_functor0\ X5\ X1\ X2) \wedge (m2\_functor0\ X5\ X1\ X2)) \Rightarrow (\forall X6.(m1\_functor3\ X6\ X1\ X2\ X4\ X5) \Rightarrow ((r1\_functor3\ X1\ X2\ X4\ X5) \Rightarrow ((r1\_functor3\ X0\ X2\ (k1\_functor3\ X0\ X1\ X2\ X3\ X4)\ (k1\_functor3\ X0\ X1\ X2\ X3\ X5)) \wedge (m1\_functor3\ (k6\_functor3\ X0\ X1\ X2\ X4\ X5\ X3\ X6)\ X0\ X2\ (k1\_functor3\ X0\ X1\ X2\ X3\ X4)\ (k1\_functor3\ X0\ X1\ X2\ X3\ X5)))))))))) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v2\_altcat\_1\ X0)\wedge((v11\_altcat\_1\ X0)\wedge((v12\_altcat\_1\ X0)\wedge(l2\_altcat\_1\ X0)))))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v2\_altcat\_1\ X1)\wedge((v11\_altcat\_1\ X1)\wedge((v12\_altcat\_1\ X1)\wedge(l2\_altcat\_1\ X1)))))\Rightarrow(\forall X2.((\neg v2\_struct\_0\ X2)\wedge((v2\_altcat\_1\ X2)\wedge((v11\_altcat\_1\ X2)\wedge((v12\_altcat\_1\ X2)\wedge(l2\_altcat\_1\ X2)))))\Rightarrow(\forall X3.((v15\_functor0\ X3\ X1\ X2)\wedge(m2\_functor0\ X3\ X1\ X2))\Rightarrow(\forall X4.((v15\_functor0\ X4\ X1\ X2)\wedge(m2\_functor0\ X4\ X1\ X2))\Rightarrow(\forall X5.((v15\_functor0\ X5\ X2\ X0)\wedge(m2\_functor0\ X5\ X2\ X0))\Rightarrow(\forall X6.(m1\_functor3\ X6\ X1\ X2\ X3\ X4)\Rightarrow((r1\_functor3\ X1\ X2\ X3\ X4)\Rightarrow((r1\_functor3\ X1\ X0\ (k1\_functor3\ X1\ X2\ X0\ X3\ X5)\ (k1\_functor3\ X1\ X2\ X0\ X4\ X5))\wedge(m1\_functor3\ (k5\_functor3\ X1\ X2\ X0\ X3\ X4\ X6\ X5)\ X1\ X0\ (k1\_functor3\ X1\ X2\ X0\ X3\ X5)\ (k1\_functor3\ X1\ X2\ X0\ X4\ X5)))))))))) \tag{2}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v2\_altcat\_1\ X0)\wedge((v11\_altcat\_1\ X0)\wedge((v12\_altcat\_1\ X0)\wedge(l2\_altcat\_1\ X0)))))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v2\_altcat\_1\ X1)\wedge((v11\_altcat\_1\ X1)\wedge((v12\_altcat\_1\ X1)\wedge(l2\_altcat\_1\ X1)))))\Rightarrow(\forall X2.((v15\_functor0\ X2\ X0\ X1)\wedge(m2\_functor0\ X2\ X0\ X1))\Rightarrow(\forall X3.((v15\_functor0\ X3\ X0\ X1)\wedge(m2\_functor0\ X3\ X0\ X1))\Rightarrow(\forall X4.((v15\_functor0\ X4\ X0\ X1)\wedge(m2\_functor0\ X4\ X0\ X1))\Rightarrow(\forall X5.(m1\_functor3\ X5\ X0\ X1\ X2\ X3)\Rightarrow(\forall X6.(m1\_functor3\ X6\ X0\ X1\ X3\ X4)\Rightarrow(((r1\_functor3\ X0\ X1\ X2\ X3)\wedge(r1\_functor3\ X0\ X1\ X3\ X4))\Rightarrow(m1\_functor3\ (k5\_functor2\ X0\ X1\ X2\ X3\ X4\ X5\ X6)\ X0\ X1\ X2\ X4)))))))) \tag{3}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v2\_altcat\_1\ X0)\wedge((v11\_altcat\_1\ X0)\wedge((v12\_altcat\_1\ X0)\wedge(l2\_altcat\_1\ X0)))))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v2\_altcat\_1\ X1)\wedge((v11\_altcat\_1\ X1)\wedge((v12\_altcat\_1\ X1)\wedge(l2\_altcat\_1\ X1)))))\Rightarrow(\forall X2.((v15\_functor0\ X2\ X0\ X1)\wedge(m2\_functor0\ X2\ X0\ X1))\Rightarrow(\forall X3.((v15\_functor0\ X3\ X0\ X1)\wedge(m2\_functor0\ X3\ X0\ X1))\Rightarrow(\forall X4.((v15\_functor0\ X4\ X0\ X1)\wedge(m2\_functor0\ X4\ X0\ X1))\Rightarrow(((r1\_functor3\ X0\ X1\ X2\ X3)\wedge(r1\_functor3\ X0\ X1\ X3\ X4))\Rightarrow(r1\_functor3\ X0\ X1\ X2\ X4)))))) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0\ X0)\wedge(((v1\_relat\_1\ X1)\wedge((v4\_relat\_1\ X1\ X0)\wedge((v1\_funct\_1\ X1)\wedge(v1\_partfun1\ X1\ X0))))\wedge((v1\_relat\_1\ X2)\wedge((v4\_relat\_1\ X2\ X0)\wedge((v1\_funct\_1\ X2)\wedge(v1\_partfun1\ X2\ X0))))))\Rightarrow((r8\_pboole\ X0\ X1\ X2)\Leftrightarrow(X1=X2)) \tag{5}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_struct\_0\ X0))\Rightarrow(\neg v1\_xboole\_0\ (u1\_struct\_0\ X0)) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(((\neg v2\_struct\_0\ X0)\wedge((v2\_altcat\_1\ X0)\wedge((v12\_altcat\_1\ X0)\wedge(l2\_altcat\_1\ X0))))\wedge(((\neg v2\_struct\_0\ X1)\wedge((v2\_altcat\_1\ X1)\wedge((v12\_altcat\_1\ X1)\wedge(l2\_altcat\_1\ X1))))\wedge(((v15\_functor0\ X2\ X0\ X1)\wedge(m2\_functor0\ X2\ X0\ X1))\wedge((v15\_functor0\ X3\ X0\ X1)\wedge(m2\_functor0\ X3\ X0\ X1)))))\Rightarrow(\forall X4.(m2\_functor2\ X4\ X0\ X1\ X2\ X3)\Rightarrow(m1\_functor2\ X4\ X0\ X1\ X2\ X3)) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(((\neg v2\_struct\_0\ X0)\wedge((v2\_altcat\_1\ X0)\wedge((v11\_altcat\_1\ X0)\wedge((v12\_altcat\_1\ X0)\wedge(l2\_altcat\_1\ X0)))))\wedge(((\neg v2\_struct\_0\ X1)\wedge((v2\_altcat\_1\ X1)\wedge((v11\_altcat\_1\ X1)\wedge((v12\_altcat\_1\ X1)\wedge(l2\_altcat\_1\ X1)))))\wedge(((v15\_functor0\ X2\ X0\ X1)\wedge(m2\_functor0\ X2\ X0\ X1))\wedge((v15\_functor0\ X3\ X0\ X1)\wedge(m2\_functor0\ X3\ X0\ X1)))))\Rightarrow(\forall X4.(m1\_functor3\ X4\ X0\ X1\ X2\ X3)\Rightarrow(m2\_functor2\ X4\ X0\ X1\ X2\ X3)) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(((\neg v2\_struct\_0\ X0)\wedge((v2\_altcat\_1\ X0)\wedge((v12\_altcat\_1\ X0)\wedge(l2\_altcat\_1\ X0))))\wedge(((\neg v2\_struct\_0\ X1)\wedge((v2\_altcat\_1\ X1)\wedge((v12\_altcat\_1\ X1)\wedge(l2\_altcat\_1\ X1))))\wedge((m2\_functor0\ X2\ X0\ X1)\wedge(m2\_functor0\ X3\ X0\ X1))))\Rightarrow(\forall X4.(m1\_functor2\ X4\ X0\ X1\ X2\ X3)\Rightarrow((v1\_relat\_1\ X4)\wedge((v4\_relat\_1\ X4\ (u1\_struct\_0\ X0))\wedge((v1\_funct\_1\ X4)\wedge(v1\_partfun1\ X4\ (u1\_struct\_0\ X0))))) \tag{9}$$

Assume the following.

$$\forall X0.(l2\_altcat\_1\ X0)\Rightarrow(l1\_altcat\_1\ X0) \tag{10}$$

Assume the following.

$$\forall X0.(l1\_altcat\_1\ X0)\Rightarrow(l1\_struct\_0\ X0) \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5.\ \forall X6.\forall X7.\forall X8.(((\neg v2\_struct\_0\ X0)\wedge((v2\_altcat\_1\ X0)\wedge((v12\_altcat\_1\ X0)\wedge(l2\_altcat\_1\ X0))))\wedge(((\neg v2\_struct\_0\ X1)\wedge((v2\_altcat\_1\ X1)\wedge((v12\_altcat\_1\ X1)\wedge(l2\_altcat\_1\ X1))))\wedge(((\neg v2\_struct\_0\ X2)\wedge((v2\_altcat\_1\ X2)\wedge((v12\_altcat\_1\ X2)\wedge(l2\_altcat\_1\ X2))))\wedge(((v15\_functor0\ X3\ X0\ X1)\wedge(m2\_functor0\ X3\ X0\ X1))\wedge(((v15\_functor0\ X4\ X0\ X1)\wedge(m2\_functor0\ X4\ X0\ X1))\wedge(((v15\_functor0\ X5\ X1\ X2)\wedge(m2\_functor0\ X5\ X1\ X2))\wedge(((v15\_functor0\ X6\ X1\ X2)\wedge(m2\_functor0\ X6\ X1\ X2))\wedge((m1\_functor2\ X7\ X0\ X1\ X3\ X4)\wedge(m1\_functor2\ X8\ X1\ X2\ X5\ X6)))))))))\Rightarrow(m1\_functor2\ (k7\_functor3\ X0\ X1\ X2\ X3\ X4\ X5\ X6\ X7\ X8)\ X0\ X2\ (k1\_functor3\ X0\ X1\ X2\ X3\ X5)\ (k1\_functor3\ X0\ X1\ X2\ X4\ X6)) \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5.\ \forall X6.(((\neg v2\_struct\_0\ X0)\wedge((v2\_altcat\_1\ X0)\wedge((v11\_altcat\_1\ X0)\wedge((v12\_altcat\_1\ X0)\wedge(l2\_altcat\_1\ X0)))))\wedge(((\neg v2\_struct\_0\ X1)\wedge((v2\_altcat\_1\ X1)\wedge((v11\_altcat\_1\ X1)\wedge((v12\_altcat\_1\ X1)\wedge(l2\_altcat\_1\ X1)))))\wedge(((v15\_functor0\ X2\ X0\ X1)\wedge(m2\_functor0\ X2\ X0\ X1))\wedge(((v15\_functor0\ X3\ X0\ X1)\wedge(m2\_functor0\ X3\ X0\ X1))\wedge(((v15\_functor0\ X4\ X0\ X1)\wedge(m2\_functor0\ X4\ X0\ X1))\wedge((m2\_functor2\ X5\ X0\ X1\ X2\ X3)\wedge(m2\_functor2\ X6\ X0\ X1\ X3\ X4)))))))\Rightarrow(m2\_functor2\ (k5\_functor2\ X0\ X1\ X2\ X3\ X4\ X5\ X6)\ X0\ X1\ X2\ X4) \tag{13}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.(((\neg v2\_struct\_0\ X0)\wedge((v2\_altcat\_1\ X0)\wedge((v12\_altcat\_1\ X0)\wedge(l2\_altcat\_1\ X0))))\wedge(((\neg v2\_struct\_0\ X1)\wedge((v2\_altcat\_1\ X1)\wedge((v12\_altcat\_1\ X1)\wedge(l2\_altcat\_1\ X1))))\wedge(((\neg v2\_struct\_0\ X2)\wedge((v12\_altcat\_1\ X2)\wedge(l2\_altcat\_1\ X2)))\wedge(((v15\_functor0\ X3\ X0\ X1)\wedge(m2\_functor0\ X3\ X0\ X1))\wedge((v15\_functor0\ X4\ X1\ X2)\wedge(m2\_functor0\ X4\ X1\ X2))))))\Rightarrow((v9\_functor0\ (k1\_functor3\ X0\ X1\ X2\ X3\ X4)\ X0\ X2)\wedge((v15\_functor0\ (k1\_functor3\ X0\ X1\ X2\ X3\ X4)\ X0\ X2)\wedge(m2\_functor0\ (k1\_functor3\ X0\ X1\ X2\ X3\ X4)\ X0\ X2))) \tag{14}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v2\_altcat\_1\ X0)\wedge((v11\_altcat\_1\ X0)\wedge((v12\_altcat\_1\ X0)\wedge(l2\_altcat\_1\ X0)))))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v2\_altcat\_1\ X1)\wedge((v11\_altcat\_1\ X1)\wedge((v12\_altcat\_1\ X1)\wedge(l2\_altcat\_1\ X1)))))\Rightarrow(\forall X2.((v15\_functor0\ X2\ X0\ X1)\wedge(m2\_functor0\ X2\ X0\ X1))\Rightarrow(\forall X3.((v15\_functor0\ X3\ X0\ X1)\wedge(m2\_functor0\ X3\ X0\ X1))\Rightarrow(\forall X4.((v15\_functor0\ X4\ X0\ X1)\wedge(m2\_functor0\ X4\ X0\ X1))\Rightarrow(((r2\_functor2\ X0\ X1\ X2\ X3)\wedge(r2\_functor2\ X0\ X1\ X3\ X4))\Rightarrow(\forall X5.(m2\_functor2\ X5\ X0\ X1\ X2\ X3)\Rightarrow(\forall X6.(m2\_functor2\ X6\ X0\ X1\ X3\ X4)\Rightarrow(\forall X7.(m2\_functor2\ X7\ X0\ X1\ X2\ X4)\Rightarrow((X7 = k5\_functor2\ X0\ X1\ X2\ X3\ X4\ X5\ X6)\Leftrightarrow(r8\_pboole\ (u1\_struct\_0\ X0)\ X7\ (k3\_functor2\ X0\ X1\ X2\ X3\ X4\ X5\ X6))))))))))) \tag{15}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v2\_altcat\_1\ X0)\wedge((v11\_altcat\_1\ X0)\wedge((v12\_altcat\_1\ X0)\wedge(l2\_altcat\_1\ X0)))))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v2\_altcat\_1\ X1)\wedge((v11\_altcat\_1\ X1)\wedge((v12\_altcat\_1\ X1)\wedge(l2\_altcat\_1\ X1)))))\Rightarrow(\forall X2.((v15\_functor0\ X2\ X0\ X1)\wedge(m2\_functor0\ X2\ X0\ X1))\Rightarrow(\forall X3.((v15\_functor0\ X3\ X0\ X1)\wedge(m2\_functor0\ X3\ X0\ X1))\Rightarrow((r1\_functor3\ X0\ X1\ X2\ X3)\Leftrightarrow((r2\_functor2\ X0\ X1\ X2\ X3)\wedge((r1\_functor2\ X0\ X1\ X3\ X2)\wedge(\exists X4.(m2\_functor2\ X4\ X0\ X1\ X2\ X3)\wedge(\forall X5.(m1\_subset\_1\ X5\ (u1\_struct\_0\ X0))\Rightarrow(v3\_altcat\_3\ (k2\_functor2\ X0\ X1\ X2\ X3\ X4\ X5)\ X1\ (k3\_functor0\ X0\ X1\ X2\ X5)\ (k3\_functor0\ X0\ X1\ X3\ X5)))))))))) \tag{16}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v2\_altcat\_1\ X0)\wedge((v12\_altcat\_1\ X0)\wedge(l2\_altcat\_1\ X0))))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v2\_altcat\_1\ X1)\wedge((v12\_altcat\_1\ X1)\wedge(l2\_altcat\_1\ X1))))\Rightarrow(\forall X2.((\neg v2\_struct\_0\ X2)\wedge((v2\_altcat\_1\ X2)\wedge((v12\_altcat\_1\ X2)\wedge(l2\_altcat\_1\ X2))))\Rightarrow(\forall X3.((v15\_functor0\ X3\ X0\ X1)\wedge(m2\_functor0\ X3\ X0\ X1))\Rightarrow(\forall X4.((v15\_functor0\ X4\ X0\ X1)\wedge(m2\_functor0\ X4\ X0\ X1))\Rightarrow(\forall X5.((v15\_functor0\ X5\ X1\ X2)\wedge(m2\_functor0\ X5\ X1\ X2))\Rightarrow(\forall X6.((v15\_functor0\ X6\ X1\ X2)\wedge(m2\_functor0\ X6\ X1\ X2))\Rightarrow(\forall X7.(m1\_functor2\ X7\ X0\ X1\ X3\ X4)\Rightarrow(\forall X8.(m1\_functor2\ X8\ X1\ X2\ X5\ X6)\Rightarrow(k7\_functor3\ X0\ X1\ X2\ X3\ X4\ X5\ X6\ X7\ X8 = k3\_functor2\ X0\ X2\ (k1\_functor3\ X0\ X1\ X2\ X3\ X5)\ (k1\_functor3\ X0\ X1\ X2\ X4\ X5)\ (k1\_functor3\ X0\ X1\ X2\ X4\ X6)\ (k5\_functor3\ X0\ X1\ X2\ X3\ X4\ X7\ X5)\ (k6\_functor3\ X0\ X1\ X2\ X5\ X6\ X4\ X8))))))))))) \tag{17}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v2\_altcat\_1\ X0)\wedge((v11\_altcat\_1\ X0)\wedge((v12\_altcat\_1\ X0)\wedge(l2\_altcat\_1\ X0)))))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v2\_altcat\_1\ X1)\wedge((v11\_altcat\_1\ X1)\wedge((v12\_altcat\_1\ X1)\wedge(l2\_altcat\_1\ X1)))))\Rightarrow(\forall X2.((\neg v2\_struct\_0\ X2)\wedge((v2\_altcat\_1\ X2)\wedge((v11\_altcat\_1\ X2)\wedge((v12\_altcat\_1\ X2)\wedge(l2\_altcat\_1\ X2)))))\Rightarrow(\forall X3.((v15\_functor0\ X3\ X0\ X1)\wedge(m2\_functor0\ X3\ X0\ X1))\Rightarrow(\forall X4.((v15\_functor0\ X4\ X0\ X1)\wedge(m2\_functor0\ X4\ X0\ X1))\Rightarrow(\forall X5.((v15\_functor0\ X5\ X1\ X2)\wedge(m2\_functor0\ X5\ X1\ X2))\Rightarrow(\forall X6.((v15\_functor0\ X6\ X1\ X2)\wedge(m2\_functor0\ X6\ X1\ X2))\Rightarrow(\forall X7.(m1\_functor3\ X7\ X0\ X1\ X3\ X4)\Rightarrow(\forall X8.(m1\_functor3\ X8\ X1\ X2\ X5\ X6)\Rightarrow(((r1\_functor3\ X0\ X1\ X3\ X4)\wedge(r1\_functor3\ X1\ X2\ X5\ X6))\Rightarrow((r1\_functor3\ X0\ X2\ (k1\_functor3\ X0\ X1\ X2\ X3\ X5)\ (k1\_functor3\ X0\ X1\ X2\ X4\ X6))\wedge(m1\_functor3\ (k7\_functor3\ X0\ X1\ X2\ X3\ X4\ X5\ X6\ X7\ X8)\ X0\ X2\ (k1\_functor3\ X0\ X1\ X2\ X3\ X5)\ (k1\_functor3\ X0\ X1\ X2\ X4\ X6))))))))))))$$