

t16\_yellow18

(TMGc2YJbDE5i9HBo9jBUMvX11Zyo71Cz8ju)

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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  $r2\_yellow18 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r2\_functor0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v21\_functor0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_yellow18 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v9\_functor0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v16\_functor0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m2\_functor0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_altcat\_1 X0) \wedge ((v11\_altcat\_1 \\ & \quad X0) \wedge ((v12\_altcat\_1 X0) \wedge (l2\_altcat\_1 X0)))))) \Rightarrow (\forall X1.((\neg v2\_struct\_0 X1) \wedge ((v2\_altcat\_1 X1) \wedge ((v11\_altcat\_1 X1) \wedge ((v12\_altcat\_1 \\ & \quad X1) \wedge (l2\_altcat\_1 X1)))))) \Rightarrow ((r2\_yellow18 X0 X1) \Rightarrow (v21\_functor0 \\ & \quad (k2\_yellow18 X0 X1) X0 X1))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2\_struct\_0 X0) \wedge ((v2\_altcat\_1 X0) \wedge \\ & \quad ((v11\_altcat\_1 X0) \wedge ((v12\_altcat\_1 X0) \wedge (l2\_altcat\_1 X0)))))) \wedge \\ & \quad ((\neg v2\_struct\_0 X1) \wedge ((v2\_altcat\_1 X1) \wedge ((v11\_altcat\_1 X1) \wedge ((v12\_altcat\_1 X1) \wedge (l2\_altcat\_1 X1)))))) \Rightarrow ((v9\_functor0 (k2\_yellow18 \\ & \quad X0 X1) X0 X1) \wedge ((v16\_functor0 (k2\_yellow18 X0 X1) X0 X1) \wedge (m2\_functor0 \\ & \quad (k2\_yellow18 X0 X1) X0 X1))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_altcat\_1 X0) \wedge ((v12\_altcat\_1 \\ & \quad X0) \wedge (l2\_altcat\_1 X0)))) \Rightarrow (\forall X1.((\neg v2\_struct\_0 X1) \wedge ((v2\_altcat\_1 \\ & \quad X1) \wedge ((v12\_altcat\_1 X1) \wedge (l2\_altcat\_1 X1)))) \Rightarrow ((r2\_functor0 X0 \\ & \quad X1) \Leftrightarrow (\exists X2.(m2\_functor0 X2 X0 X1) \wedge ((v21\_functor0 X2 X0 X1) \wedge \\ & \quad (v16\_functor0 X2 X0 X1)))))) \end{aligned} \tag{3}$$

**Theorem 1**

$$\begin{aligned} \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_altcat\_1 X0) \wedge ((v11\_altcat\_1 \\ X0) \wedge ((v12\_altcat\_1 X0) \wedge (l2\_altcat\_1 X0)))))) \Rightarrow (\forall X1. (( \\ \neg v2\_struct\_0 X1) \wedge ((v2\_altcat\_1 X1) \wedge ((v11\_altcat\_1 X1) \wedge ((v12\_altcat\_1 \\ X1) \wedge (l2\_altcat\_1 X1)))))) \Rightarrow ((r2\_yellow18 X0 X1) \Rightarrow (r2\_functor0 \\ X0 X1)) \end{aligned}$$