

t45\_coh\_sp  
(TMbecNSrdzSdENyErskL38yqVHrxGowbqZG)

October 27, 2020

Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k20\_coh\_sp : \iota \Rightarrow \iota$  be given. Let  $k21\_coh\_sp : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k22\_coh\_sp : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k24\_coh\_sp : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k3\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1\_subset\_1 X1 (k20\_coh\_sp X0)) \Rightarrow (\forall X2. \\ & (m1\_subset\_1 X2 (k20\_coh\_sp X0)) \Rightarrow ((k21\_coh\_sp X0 X1 = k22\_coh\_sp \\ & X0 X2) \Rightarrow ((k2\_xtuple\_0 (k24\_coh\_sp X0 X2 X1) = k3\_relat\_1 (k2\_xtuple\_0 \\ & X2) (k2\_xtuple\_0 X1)) \wedge ((k21\_coh\_sp X0 (k24\_coh\_sp X0 X2 X1) = k21\_coh\_sp \\ & X0 X2) \wedge (k22\_coh\_sp X0 (k24\_coh\_sp X0 X2 X1) = k22\_coh\_sp X0 X1)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v1\_relat\_1 X0) \Rightarrow (\forall X1. (v1\_relat\_1 X1) \Rightarrow (\forall X2. \\ & (v1\_relat\_1 X2) \Rightarrow (k3\_relat\_1 (k3\_relat\_1 X0 X1) X2 = k3\_relat\_1 \\ & X0 (k3\_relat\_1 X1 X2)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1\_subset\_1 X1 (k20\_coh\_sp X0)) \Rightarrow (\forall X2. \\ & (m1\_subset\_1 X2 (k20\_coh\_sp X0)) \Rightarrow (((k2\_xtuple\_0 X1 = k2\_xtuple\_0 \\ & X2) \wedge ((k21\_coh\_sp X0 X1 = k21\_coh\_sp X0 X2) \wedge (k22\_coh\_sp X0 X1 = k22\_coh\_sp \\ & X0 X2))) \Rightarrow (X1 = X2))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1\_subset\_1 X1 (k20\_coh\_sp X0)) \Rightarrow ((v1\_relat\_1 \\ & (k2\_xtuple\_0 X1)) \wedge (v1\_funct\_1 (k2\_xtuple\_0 X1))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((m1\_subset\_1 X1 (k20\_coh\_sp \\ & X0)) \wedge (m1\_subset\_1 X2 (k20\_coh\_sp X0))) \Rightarrow (m1\_subset\_1 (k24\_coh\_sp \\ & X0 X1 X2) (k20\_coh\_sp X0)) \end{aligned} \quad (5)$$

**Theorem 1**

$$\begin{aligned} & \forall X0. \forall X1. (m1\_subset\_1 X1 (k20\_coh\_sp X0)) \Rightarrow (\forall X2. \\ & (m1\_subset\_1 X2 (k20\_coh\_sp X0)) \Rightarrow (\forall X3. (m1\_subset\_1 X3 \\ & (k20\_coh\_sp X0)) \Rightarrow (((k21\_coh\_sp X0 X1 = k22\_coh\_sp X0 X2) \wedge (k21\_coh\_sp \\ & X0 X3 = k22\_coh\_sp X0 X1)) \Rightarrow (k24\_coh\_sp X0 (k24\_coh\_sp X0 X2 X1) X3 = \\ & k24\_coh\_sp X0 X2 (k24\_coh\_sp X0 X1 X3)))))) \end{aligned}$$