

t12\_finseq\_4  
(TMHkoR1UFYKMKaXDhfgHKvN4EYDZoHNKP2b)

October 27, 2020

Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v2\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_funct\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_finseq\_4 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r2\_finseq\_4 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k3\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow ((v2\_funct\_1 X0) \Leftrightarrow (\forall X1.(X1 \in k10\_xtuple\_0 X0) \Rightarrow (r2\_finseq\_4 X0 X1))) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1)) \Rightarrow (((v2\_funct\_1 X1) \wedge (X0 \in k9\_xtuple\_0 X1)) \Rightarrow ((X0 = k1\_funct\_1 (k2\_funct\_1 X1) (k1\_funct\_1 X1 X0)) \wedge (X0 = k1\_funct\_1 (k3\_relat\_1 X1 (k2\_funct\_1 X1) X0) X0))) \quad (2)$$

Assume the following.

$$\forall X0. ((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1. (r2\_finseq\_4 X0 X1) \Rightarrow (\forall X2. (X2 = k1\_finseq\_4 X0 X1) \Leftrightarrow ((X2 \in k9\_xtuple\_0 X0) \wedge (k1\_funct\_1 X0 X2 = X1)))) \quad (3)$$

**Theorem 1**

$$\forall X0. ((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1. ((v2\_funct\_1 X0) \wedge (X1 \in k10\_xtuple\_0 X0)) \Rightarrow (k1\_funct\_1 (k2\_funct\_1 X0) X1 = k1\_finseq\_4 X0 X1))$$