

## t99\_funct\_7

(TMWjH7ZiPWUjNb15AmVsHeWSqMUhj44mFNj)

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Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k10\_funct\_7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_funct\_7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1. \forall X2. k9\_xtuple\_0 (k2\_funct\_7 X0 X2 X1) = k9\_xtuple\_0 X0) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow ((v1\_relat\_1 (k2\_funct\_7 X0 X1 X2)) \wedge (v1\_funct\_1 (k2\_funct\_7 X0 X1 X2))) \quad (2)$$

Assume the following.

$$\forall X0. ((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1. \forall X2. (((X1 \in k9\_xtuple\_0 X0) \wedge (X2 \in k9\_xtuple\_0 X0)) \Rightarrow (k10\_funct\_7 X0 X1 X2 = k2\_funct\_7 (k2\_funct\_7 X0 X1 (k1\_funct\_1 X0 X2)) X2 (k1\_funct\_1 X0 X1)))) \wedge ((\neg (X1 \in k9\_xtuple\_0 X0) \wedge (X2 \in k9\_xtuple\_0 X0)) \Rightarrow (k10\_funct\_7 X0 X1 X2 = X0)) \quad (3)$$

**Theorem 1**

$$\forall X0. ((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1. \forall X2. k9\_xtuple\_0 (k10\_funct\_7 X0 X1 X2) = k9\_xtuple\_0 X0)$$