

# t17\_funcop\_1 (TMXouMqZFrn- MLtZKDM5rZ2yLX2GBqwWnXJe)

October 27, 2020

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  $k3\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. (X1 \in X0) \Rightarrow (k1\_funct\_1 (k2\_funcop\_1 X0 X2) X1 = X2) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (k9\_xtuple\_0 (k2\_funcop\_1 X0 X1) = X0) \wedge (r1\_tarski (k10\_xtuple\_0 (k2\_funcop\_1 X0 X1)) (k1\_tarski X1)) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1)) \Rightarrow (\forall X2. ((v1\_relat\_1 X2) \wedge (v1\_funct\_1 X2)) \Rightarrow ((X0 \in k9\_xtuple\_0 (k3\_relat\_1 X2 X1)) \Leftrightarrow ((X0 \in k9\_xtuple\_0 X2) \wedge (k1\_funct\_1 X2 X0 \in k9\_xtuple\_0 X1)))) \quad (3)$$

Assume the following.

$$\forall X0. ((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1. ((v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1)) \Rightarrow (\forall X2. ((v1\_relat\_1 X2) \wedge (v1\_funct\_1 X2)) \Rightarrow (((\forall X3. (X3 \in k9\_xtuple\_0 X2) \Leftrightarrow ((X3 \in k9\_xtuple\_0 X0) \wedge (k1\_funct\_1 X0 X3 \in k9\_xtuple\_0 X1))) \wedge (\forall X3. (X3 \in k9\_xtuple\_0 X2) \Rightarrow (k1\_funct\_1 X2 X3 = k1\_funct\_1 X1 (k1\_funct\_1 X0 X3)))) \Rightarrow (X2 = k3\_relat\_1 X0 X1)))) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (v1\_relat\_1 (k2\_funcop\_1 X0 X1)) \wedge (v1\_funct\_1 (k2\_funcop\_1 X0 X1)) \quad (5)$$

**Theorem 1**

$$\forall X0.((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1. \forall X2. \\ (X2 \in k9\_xtuple\_0 X0) \Rightarrow (k3\_relat\_1 (k2\_funcop\_1 X1 X2) X0 = k2\_funcop\_1 \\ X1 (k1\_funct\_1 X0 X2)))$$