

t25\_valued\_1 (TMah-  
WEWGszzfmkPG6TEU7EYzogqtRvYFwmZi)

October 27, 2020

Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k61\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k2\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. (((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \wedge (v7\_ordinal1 X1)) \Rightarrow ((v1\_relat\_1 (k61\_valued\_1 X0 X1)) \wedge (v1\_funct\_1 (k61\_valued\_1 X0 X1))) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (r1\_tarski X0 X1) \Leftrightarrow (\forall X2. (X2 \in X0) \Rightarrow (X2 \in X1)) \quad (2)$$

Assume the following.

$$\forall X0. ((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1. (X1 = k10\_xtuple\_0 X0) \Leftrightarrow (\forall X2. (X2 \in X1) \Leftrightarrow (\exists X3. (X3 \in k9\_xtuple\_0 X0) \wedge (X2 = k1\_funct\_1 X0 X3)))) \quad (3)$$

Assume the following.

$$\forall X0. ((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1. (v7\_ordinal1 X1) \Rightarrow (\forall X2. ((v1\_relat\_1 X2) \wedge (v1\_funct\_1 X2)) \Rightarrow ((X2 = k61\_valued\_1 X0 X1) \Leftrightarrow ((k9\_xtuple\_0 X2 = ReplSep (toset (\lambda X3 : \iota. m2\_subset\_1 X3 k1\_numbers k5\_numbers)) (\lambda X3 : \iota. X3 \in k9\_xtuple\_0 X0) (\lambda X3 : \iota. k2\_nat\_1 X3 X1)) \wedge (\forall X3. (m2\_subset\_1 X3 k1\_numbers k5\_numbers) \Rightarrow ((X3 \in k9\_xtuple\_0 X0) \Rightarrow (k1\_funct\_1 X2 (k2\_nat\_1 X3 X1) = k1\_funct\_1 X0 X3)))))))) \quad (4)$$

**Theorem 1**

$$\forall X0. ((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1. (v7\_ordinal1 X1) \Rightarrow (r1\_tarski (k10\_xtuple\_0 (k61\_valued\_1 X0 X1)) (k10\_xtuple\_0 X0)))$$