

## t73\_funct\_7

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $k6\_numbers : \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k9\_funct\_7 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k1\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k3\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Assume the following.

$$\forall X0.(v1\_relat\_1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow (k9\_funct\_7 X0 (k1\_nat\_1 X1 np\_1) = k3\_relat\_1 (k9\_funct\_7 X0 X1) X0)) \quad (1)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (\neg(X0 \neq k6\_numbers) \wedge (\forall X1.(v7\_ordinal1 X1) \Rightarrow (X0 \neq k1\_nat\_1 X1 np\_1))) \quad (2)$$

Assume the following.

$$\forall X0.(v1\_relat\_1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow (k9\_funct\_7 X0 (k1\_nat\_1 X1 np\_1) = k3\_relat\_1 X0 (k9\_funct\_7 X0 X1))) \quad (3)$$

Assume the following.

$$\forall X0.(v1\_relat\_1 X0) \Rightarrow (\forall X1.(v1\_relat\_1 X1) \Rightarrow (r1\_tarski (k10\_xtuple\_0 (k3\_relat\_1 X0 X1)) (k10\_xtuple\_0 X1))) \quad (4)$$

Assume the following.

$$\forall X0.(v1\_relat\_1 X0) \Rightarrow (\forall X1.(v1\_relat\_1 X1) \Rightarrow (r1\_tarski (k9\_xtuple\_0 (k3\_relat\_1 X0 X1)) (k9\_xtuple\_0 X0))) \quad (5)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X0) \wedge (v7\_ordinal1 X1)) \Rightarrow (v1\_relat\_1 (k9\_funct\_7 X0 X1)) \quad (7)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k4\_ordinal1) \Rightarrow (v7\_ordinal1 X0) \quad (8)$$

**Theorem 1**

$$\begin{aligned} \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.(v1\_relat\_1 \\ X1) \Rightarrow ((X0 \neq k6\_numbers) \Rightarrow ((r1\_tarski (k9\_xtuple\_0 (k9\_funct\_7 \\ X1 X0)) (k9\_xtuple\_0 X1)) \wedge (r1\_tarski (k10\_xtuple\_0 (k9\_funct\_7 \\ X1 X0)) (k10\_xtuple\_0 X1)))))) \end{aligned}$$