

t9\_funct\_4 (TMNFGbd-  
VMk9xTzexPh44JFYiRhS8da1P5zY)

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Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. (v1\_relat\_1 X1) \Rightarrow (\forall X2. (v1\_relat\_1 X2) \Rightarrow ((r1\_tarski X1 X2) \Rightarrow (r1\_tarski (k5\_relat\_1 X1 X0) (k5\_relat\_1 X2 X0)))) \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. (v1\_relat\_1 X1) \Rightarrow (\forall X2. (v1\_relat\_1 X2) \Rightarrow ((r1\_tarski X1 X2) \Rightarrow (r1\_tarski (k6\_relat\_1 X0 X1) (k6\_relat\_1 X0 X2)))) \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. (v1\_relat\_1 X1) \Rightarrow (v1\_relat\_1 (k6\_relat\_1 X0 X1)) \tag{3}$$

**Theorem 1**

$$\forall X0. \forall X1. \forall X2. ((v1\_relat\_1 X2) \wedge (v1\_funct\_1 X2)) \Rightarrow (\forall X3. ((v1\_relat\_1 X3) \wedge (v1\_funct\_1 X3)) \Rightarrow ((r1\_tarski X2 X3) \Rightarrow (r1\_tarski (k5\_relat\_1 (k6\_relat\_1 X0 X2) X1) (k5\_relat\_1 (k6\_relat\_1 X0 X3) X1))))$$