

t21\_funct\_5  
(TMJv7TQjdLovqZXtnQxJdQ1BYn73Cpn3YM3)

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Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k3\_funct\_5 : \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_funct\_4 : \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_5 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1\_relat\_1 X2) \wedge (v1\_funct\_1 \\ X2)) \Rightarrow & ((k4\_tarski X0 X1 \in k9\_xtuple\_0 X2) \Leftrightarrow (k4\_tarski X1 X0 \in k9\_xtuple\_0 \\ & (k2\_funct\_4 X2))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1\_relat\_1 X2) \wedge (v1\_funct\_1 \\ X2)) \Rightarrow & ((k4\_tarski X0 X1 \in k9\_xtuple\_0 X2) \Rightarrow ((X0 \in k9\_xtuple\_0 (k1\_funct\_5 \\ X2)) \wedge & ((v1\_relat\_1 (k1\_funct\_1 (k1\_funct\_5 X2) X0)) \wedge (v1\_funct\_1 \\ & (k1\_funct\_1 (k1\_funct\_5 X2) X0)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. ((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow ((v1\_relat\_1 (k2\_funct\_4 X0)) \wedge (v1\_funct\_1 (k2\_funct\_4 X0))) \tag{3}$$

Assume the following.

$$\forall X0. ((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (k3\_funct\_5 X0 = k1\_funct\_5 (k2\_funct\_4 X0)) \tag{4}$$

**Theorem 1**

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1\_relat\_1 X2) \wedge (v1\_funct\_1 \\ X2)) \Rightarrow & ((k4\_tarski X0 X1 \in k9\_xtuple\_0 X2) \Rightarrow ((X1 \in k9\_xtuple\_0 (k3\_funct\_5 \\ X2)) \wedge & ((v1\_relat\_1 (k1\_funct\_1 (k3\_funct\_5 X2) X1)) \wedge (v1\_funct\_1 \\ & (k1\_funct\_1 (k3\_funct\_5 X2) X1)))))) \end{aligned}$$