

t21\_afinsq\_1  
(TMNu9SNVqFADhoqai3oFJQFwogmQs6tj7oz)

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Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v5\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $r1\_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_ordinal4 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k10\_ordinal2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.(v3\_ordinal1 X0) \Rightarrow (\forall X1.(v3\_ordinal1 X1) \Rightarrow ((r1\_ordinal1 X0 (k10\_ordinal2 X0 X1)) \wedge (r1\_ordinal1 X1 (k10\_ordinal2 X0 X1)))) \quad (1)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v5\_ordinal1 X0))) \Rightarrow (v3\_ordinal1 (k9\_xtuple\_0 X0)) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_relat\_1 X0) \wedge ((v5\_ordinal1 X0) \wedge (v1\_funct\_1 X0))) \wedge ((v1\_relat\_1 X1) \wedge ((v5\_ordinal1 X1) \wedge (v1\_funct\_1 X1)))) \Rightarrow ((v1\_relat\_1 (k1\_ordinal4 X0 X1)) \wedge ((v5\_ordinal1 (k1\_ordinal4 X0 X1)) \wedge (v1\_funct\_1 (k1\_ordinal4 X0 X1)))) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge ((v5\_ordinal1 X0) \wedge (v1\_funct\_1 X0))) \Rightarrow \\ & (\forall X1.((v1\_relat\_1 X1) \wedge ((v5\_ordinal1 X1) \wedge (v1\_funct\_1 X1))) \Rightarrow (\forall X2.((v1\_relat\_1 X2) \wedge ((v5\_ordinal1 X2) \wedge (v1\_funct\_1 X2)))) \Rightarrow ((X2 = k1\_ordinal4 X0 X1) \Leftrightarrow ((k9\_xtuple\_0 X2 = k10\_ordinal2 \\ & (k9\_xtuple\_0 X0) (k9\_xtuple\_0 X1)) \wedge (\forall X3.(v3\_ordinal1 X3) \Rightarrow ((X3 \in k9\_xtuple\_0 X0) \Rightarrow (k1\_funct\_1 X2 X3 = k1\_funct\_1 X0 X3)))) \wedge \\ & (\forall X3.(v3\_ordinal1 X3) \Rightarrow ((X3 \in k9\_xtuple\_0 X1) \Rightarrow (k1\_funct\_1 X2 (k10\_ordinal2 (k9\_xtuple\_0 X0) X3) = k1\_funct\_1 X1 X3)))))) \quad (4) \end{aligned}$$

**Theorem 1**

$$\begin{aligned} \forall X0.((v1\_relat\_1 X0) \wedge ((v5\_ordinal1 X0) \wedge (v1\_funct\_1 X0))) \Rightarrow \\ (\forall X1.((v1\_relat\_1 X1) \wedge ((v5\_ordinal1 X1) \wedge (v1\_funct\_1 \\ X1)))) \Rightarrow (r1\_ordinal1 (k9\_xtuple\_0 X0) (k9\_xtuple\_0 (k1\_ordinal4 \\ X0 X1)))) \end{aligned}$$