

t61\_stirl2\_1

(TMYF JrYU82j7u7QY1BT5s6KnTBNef2ERa6M)

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Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k3\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v2\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k8\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} \forall X0.((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow ((\forall X1. \neg \\ (X1 \in k10\_xtuple\_0 X0) \wedge (\forall X2. k8\_relat\_1 X0 (k1\_tarski X1) \neq \\ k1\_tarski X2)) \Leftrightarrow (v2\_funct\_1 X0)) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (v1\_relat\_1 X1) \Rightarrow ((X0 \in k10\_xtuple\_0 X1) \Leftrightarrow \\ (k8\_relat\_1 X1 (k1\_tarski X0) \neq k1\_xboole\_0)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. ((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1. \forall X2. \\ (k8\_relat\_1 X0 (k1\_tarski X2) = k1\_tarski X1) \Rightarrow ((X1 \in k9\_xtuple\_0 \\ X0) \wedge ((X2 \in k10\_xtuple\_0 X0) \wedge (k1\_funct\_1 X0 X1 = X2)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1)) \Rightarrow (\forall X2. \\ ((v1\_relat\_1 X2) \wedge (v1\_funct\_1 X2)) \Rightarrow ((X0 \in k10\_xtuple\_0 (k3\_relat\_1 \\ X2 X1)) \Rightarrow (X0 \in k10\_xtuple\_0 X1))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (v1\_relat\_1 X1) \Rightarrow (\forall X2. (v1\_relat\_1 \\ X2) \Rightarrow (k8\_relat\_1 (k3\_relat\_1 X1 X2) X0 = k8\_relat\_1 X1 (k8\_relat\_1 \\ X2 X0))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. v1\_relat\_1 (k3\_relat\_1 X0 X1) \quad (6)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1.(( \\ & \quad v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1)) \Rightarrow (\forall X2. \neg (X2 \in k10\_xtuple\_0 \\ & \quad (k3\_relat\_1 X0 X1)) \wedge ((v2\_funct\_1 X1) \wedge (\forall X3. \neg (X3 \in k9\_xtuple\_0 \\ & \quad X1) \wedge ((X3 \in k10\_xtuple\_0 X0) \wedge ((k8\_relat\_1 X1 (k1\_tarski X2) = k1\_tarski \\ & \quad X3) \wedge (k8\_relat\_1 X0 (k1\_tarski X3) = k8\_relat\_1 (k3\_relat\_1 X0 X1) \\ & \quad (k1\_tarski X2)))))))))) \end{aligned}$$