

t103_funct_1

(TMb7UmTKQTT8yodK8fYqEBqSHEUTE2c8oes)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v5_funct_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v2_relat_1 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow ((v2_relat_1 X0) \Leftrightarrow \\ (\forall X1. \neg (X1 \in k9_xtuple_0 X0) \wedge (v1_xboole_0 (k1_funct_1 X0 \\ X1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Leftrightarrow (\forall X1. \neg X1 \in X0) \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.((\\ v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow ((v5_funct_1 X1 X0) \Leftrightarrow (\forall X2. \\ (X2 \in k9_xtuple_0 X1) \Rightarrow (k1_funct_1 X1 X2 \in k1_funct_1 X0 X2)))) \end{aligned} \quad (3)$$

Theorem 1

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.((\\ v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow (((v5_funct_1 X0 X1) \wedge (k9_xtuple_0 \\ X0 = k9_xtuple_0 X1)) \Rightarrow (v2_relat_1 X1))) \end{aligned}$$