

t11_funct_6

(TMUoQ3XLfjhXeG2zgpccmcMQswMG7quA4ZYt)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_funct_5 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_funct_5 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1_relat_1 X2) \wedge (v1_funct_1 \\ & X2)) \Rightarrow ((r1_tarski (k10_xtuple_0 X2) (k1_funct_2 X0 X1)) \Rightarrow ((r1_tarski \\ & (k10_xtuple_0 (k2_funct_5 X2)) X1) \wedge (r1_tarski (k10_xtuple_0 \\ & (k4_funct_5 X2)) X1))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1_relat_1 X2) \wedge (v1_funct_1 \\ & X2)) \Rightarrow ((r1_tarski (k10_xtuple_0 X2) (k1_funct_2 X0 X1)) \Rightarrow ((k9_xtuple_0 \\ & (k2_funct_5 X2) = k2_zfmisc_1 (k9_xtuple_0 X2) X0) \wedge (k9_xtuple_0 \\ & (k4_funct_5 X2) = k2_zfmisc_1 X0 (k9_xtuple_0 X2)))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow ((v1_relat_1 (k4_funct_5 X0)) \wedge (v1_funct_1 (k4_funct_5 X0))) \tag{3}$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow ((v1_relat_1 (k2_funct_5 X0)) \wedge (v1_funct_1 (k2_funct_5 X0))) \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (X2 = k1_funct_2 X0 X1) \Leftrightarrow (\forall X3. \\ & (X3 \in X2) \Leftrightarrow (\exists X4. ((v1_relat_1 X4) \wedge (v1_funct_1 X4)) \wedge ((X3 = \\ & X4) \wedge ((k9_xtuple_0 X4 = X0) \wedge (r1_tarski (k10_xtuple_0 X4) X1)))))) \end{aligned} \tag{5}$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1_relat_1 X3)\wedge (v1_funct_1 X3))\Rightarrow((X3 \in k1_funct_2 X0 (k1_funct_2 X1 X2))\Rightarrow((k2_funct_5 X3 \in k1_funct_2 (k2_zfmisc_1 X0 X1) X2)\wedge(k4_funct_5 X3 \in k1_funct_2 (k2_zfmisc_1 X1 X0) X2))))$$