t25_funct_3 (TMYQDweXQvvGvSD-jpRcZPQWGEthDBPbXUVL)

October 27, 2020

Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_tarski : \iota \Rightarrow \iota$ be given. Let $k7\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_funct\_3 : \iota \Rightarrow \iota$ be given. Let $k8\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1\_relat\_1\ X2) \wedge (v1\_funct\_1\ X2)) \Rightarrow (((r1\_tarski\ X0\ (k9\_xtuple\_0\ X2)) \wedge (r1\_tarski\ (k7\_relat\_1\ X2\ X0)\ X1)) \Rightarrow (r1\_tarski\ X0\ (k8\_relat\_1\ X2\ X1))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(\forall X2.(X2 \in X0) \Rightarrow (r1\_tarski\ X2\ X1)) \Rightarrow (r1\_tarski\ (k3\_tarski\ X0)\ X1) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1) \wedge (v1\_funct\_1\ X1)) \Rightarrow (r1\_tarski\ (k7\_relat\_1\ X1\ (k8\_relat\_1\ X1\ X0))\ X0) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1) \wedge (v1\_funct\_1\ X1)) \Rightarrow (r1\_tarski\ (k7\_relat\_1\ (k3\_funct\_3\ X1)\ X0)\ (k1\_zfmisc\_1\ (k9\_xtuple\_0\ X1))) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1) \wedge (v1\_funct\_1\ X1)) \Rightarrow ((X0 \in k9\_xtuple\_0\ (k3\_funct\_3\ X1)) \Rightarrow (k1\_funct\_1\ (k3\_funct\_3\ X1)\ X0 = k8\_relat\_1\ X1\ X0)) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((r1\_tarski\ X0\ X1) \wedge (r1\_tarski\ X1\ X2)) \Rightarrow (r1\_tarski\ X0\ X2) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (r1\_tarski\ X0\ (k3\_tarski\ X1)) \tag{7}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge (v1\_funct\_1\ X0)) \Rightarrow ((v1\_relat\_1\ (k3\_funct\_3\ X0)) \wedge (v1\_funct\_1\ (k3\_funct\_3\ X0))) \tag{8}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge (v1\_funct\_1\ X0)) \Rightarrow (\forall X1.\forall X2.(X2 = k7\_relat\_1\ X0\ X1) \Leftrightarrow (\forall X3.(X3 \in X2) \Leftrightarrow (\exists X4.(X4 \in k9\_xtuple\_0\ X0) \wedge ((X4 \in X1) \wedge (X3 = k1\_funct\_1\ X0\ X4))))) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.(r1\_tarski\ X0\ X1) \Leftrightarrow (\forall X2.(X2 \in X0) \Rightarrow (X2 \in X1)) \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k1\_zfmisc\_1\ X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow (r1\_tarski\ X2\ X0)) \tag{11}$$

Theorem 1

$$\forall X0.\forall X1.((v1\_relat\_1\ X1) \wedge (v1\_funct\_1\ X1)) \Rightarrow (r1\_tarski\ (k3\_tarski\ (k7\_relat\_1\ (k3\_funct\_3\ X1)\ X0))\ (k8\_relat\_1\ X1\ (k3\_tarski\ X0)))$$