t1_msualg_9 (TMWe2SPdNuY82zgE7X3UNhdRQ92HazZjkZE)

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Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11\_mcart\_1 : \iota \Rightarrow \iota$ be given. Let $k12\_mcart\_1 : \iota \Rightarrow \iota$ be given. Let $k1\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k2\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.(v1\_relat\_1\ X1) \Rightarrow ((X0 \in X1) \Rightarrow (X0 = k4\_tarski\ (k1\_xtuple\_0\ X0)\ (k2\_xtuple\_0\ X0))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.v1\_relat\_1\ (k2\_zfmisc\_1\ X0\ X1) \tag{2}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge (v1\_funct\_1\ X0)) \Rightarrow ((v1\_relat\_1\ (k12\_mcart\_1\ X0)) \wedge (v1\_funct\_1\ (k12\_mcart\_1\ X0))) \tag{3}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge (v1\_funct\_1\ X0)) \Rightarrow ((v1\_relat\_1\ (k11\_mcart\_1\ X0)) \wedge (v1\_funct\_1\ (k11\_mcart\_1\ X0))) \tag{4}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge (v1\_funct\_1\ X0)) \Rightarrow (\forall X1.((v1\_relat\_1\ X1) \wedge (v1\_funct\_1\ X1)) \Rightarrow ((X1 = k12\_mcart\_1\ X0) \Leftrightarrow ((k9\_xtuple\_0\ X1 = k9\_xtuple\_0\ X0) \wedge (\forall X2.(X2 \in k9\_xtuple\_0\ X0) \Rightarrow (k1\_funct\_1\ X1\ X2 = k2\_xtuple\_0\ (k1\_funct\_1\ X0\ X2)))))) \tag{5}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge (v1\_funct\_1\ X0)) \Rightarrow (\forall X1.((v1\_relat\_1\ X1) \wedge (v1\_funct\_1\ X1)) \Rightarrow ((X1 = k11\_mcart\_1\ X0) \Leftrightarrow ((k9\_xtuple\_0\ X1 = k9\_xtuple\_0\ X0) \wedge (\forall X2.(X2 \in k9\_xtuple\_0\ X0) \Rightarrow (k1\_funct\_1\ X1\ X2 = k1\_xtuple\_0\ (k1\_funct\_1\ X0\ X2)))))) \tag{6}$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1\_relat\_1\ X3)\wedge (v1\_funct\_1\ X3))\Rightarrow(((X0 \in k9\_xtuple\_0\ X3)\wedge(k1\_funct\_1\ X3\ X0 \in k2\_zfmisc\_1\ X1\ X2))\Rightarrow(k1\_funct\_1\ X3\ X0 = k4\_tarski\ (k1\_funct\_1\ (k11\_mcart\_1\ X3)\ X0)\ (k1\_funct\_1\ (k12\_mcart\_1\ X3)\ X0)))$$