l60_funct_6 (TMQXvKPUMkkZnjqPZdjn-TqB4ta4eyvPJGVL)

October 27, 2020

Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_funct\_5 : \iota \Rightarrow \iota$ be given. Let $k10\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k3\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_tarski : \iota \Rightarrow \iota$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_binop\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1) \wedge (v1\_funct\_1\ X1)) \Rightarrow (\forall X2.((v1\_relat\_1\ X2) \wedge (v1\_funct\_1\ X2)) \Rightarrow (((X0 \in k9\_xtuple\_0\ (k1\_funct\_5\ X1)) \wedge (X2 = k1\_funct\_1\ (k1\_funct\_5\ X1)\ X0)) \Rightarrow ((k9\_xtuple\_0\ X2 = k10\_xtuple\_0\ (k3\_xboole\_0\ (k9\_xtuple\_0\ X1)\ (k2\_zfmisc\_1\ (k1\_tarski\ X0)\ (k10\_xtuple\_0\ (k9\_xtuple\_0\ X1))))) \wedge ((r1\_tarski\ (k9\_xtuple\_0\ X2)\ (k10\_xtuple\_0\ (k9\_xtuple\_0\ X1))) \wedge ((r1\_tarski\ (k10\_xtuple\_0\ X2)\ (k10\_xtuple\_0\ X1)) \wedge (\forall X3.(X3 \in k9\_xtuple\_0\ X2) \Rightarrow ((k1\_funct\_1\ X2\ X3 = k1\_binop\_1\ X1\ X0\ X3) \wedge (k4\_tarski\ X0\ X3 \in k9\_xtuple\_0\ X1)))))))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1\_relat\_1\ X2) \wedge (v1\_funct\_1\ X2)) \Rightarrow ((k4\_tarski\ X0\ X1 \in k9\_xtuple\_0\ X2) \Rightarrow ((X0 \in k9\_xtuple\_0\ (k1\_funct\_5\ X2)) \wedge ((v1\_relat\_1\ (k1\_funct\_1\ (k1\_funct\_5\ X2)\ X0)) \wedge (v1\_funct\_1\ (k1\_funct\_1\ (k1\_funct\_5\ X2)\ X0))))) \tag{2}$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1\_relat\_1\ X3) \wedge (v1\_funct\_1\ X3)) \Rightarrow (\forall X4.((v1\_relat\_1\ X4) \wedge (v1\_funct\_1\ X4)) \Rightarrow (((k4\_tarski\ X0\ X1 \in k9\_xtuple\_0\ X3) \wedge ((X4 = k1\_funct\_1\ (k1\_funct\_5\ X3)\ X0) \wedge (X2 \in k9\_xtuple\_0\ X4))) \Rightarrow (k4\_tarski\ X0\ X2 \in k9\_xtuple\_0\ X3)))$$