t50_funct_6 (TMQ2uDsLXmtvh59UPEKCdyw48J1ewh5vrXU)

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Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $k9\_funct\_6 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_xboole\_0 : \iota$ be given. Let $k7\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_tarski : \iota \Rightarrow \iota$ be given. Let $k1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.k1\_funct\_2\ k1\_xboole\_0\ X0 = k1\_tarski\ k1\_xboole\_0 \tag{1}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge (v1\_funct\_1\ X0)) \Rightarrow (\forall X1.(\forall X2.\ (X2 \in k9\_xtuple\_0\ X0) \Rightarrow (k1\_funct\_1\ X0\ X2 = X1)) \Rightarrow (X0 = k2\_funcop\_1\ (k9\_xtuple\_0\ X0)\ X1)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.k7\_funcop\_1\ X0\ X1 = k2\_funcop\_1\ X0\ X1 \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1) \wedge (v1\_funct\_1\ X1)) \Rightarrow ((v1\_relat\_1\ (k9\_funct\_6\ X0\ X1)) \wedge (v1\_funct\_1\ (k9\_funct\_6\ X0\ X1))) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1) \wedge (v1\_funct\_1\ X1)) \Rightarrow (\forall X2.\ ((v1\_relat\_1\ X2) \wedge (v1\_funct\_1\ X2)) \Rightarrow ((X2 = k9\_funct\_6\ X0\ X1) \Leftrightarrow ((k9\_xtuple\_0\ X2 = k9\_xtuple\_0\ X1) \wedge (\forall X3.(X3 \in k9\_xtuple\_0\ X1) \Rightarrow (k1\_funct\_1\ X2\ X3 = k1\_funct\_2\ X0\ (k1\_funct\_1\ X1\ X3)))))) \tag{5}$$

Theorem 1

$$\forall X0.((v1\_relat\_1\ X0) \wedge (v1\_funct\_1\ X0)) \Rightarrow (k9\_funct\_6\ k1\_xboole\_0\ X0 = k7\_funcop\_1\ (k9\_xtuple\_0\ X0)\ (k1\_tarski\ k1\_xboole\_0))$$