t22_funcop_1 (TMc9n2bHnB5Mj7psCkzAsn8m5v74fes5KM2)

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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 $k3\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_binop\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k13\_funct\_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge (v1\_funct\_1\ X0)) \Rightarrow (\forall X1.((v1\_relat\_1\ X1) \wedge (v1\_funct\_1\ X1)) \Rightarrow (\forall X2.((v1\_relat\_1\ X2) \wedge (v1\_funct\_1\ X2)) \Rightarrow (\forall X3.(X3 \in k9\_xtuple\_0\ (k3\_relat\_1\ (k13\_funct\_3\ X0\ X1)\ X2)) \Rightarrow (k1\_funct\_1\ (k3\_relat\_1\ (k13\_funct\_3\ X0\ X1)\ X2)\ X3 = k1\_binop\_1\ X2\ (k1\_funct\_1\ X0\ X3)\ (k1\_funct\_1\ X1\ X3))))) \tag{1}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge (v1\_funct\_1\ X0)) \Rightarrow (\forall X1.((v1\_relat\_1\ X1) \wedge (v1\_funct\_1\ X1)) \Rightarrow (\forall X2.((v1\_relat\_1\ X2) \wedge (v1\_funct\_1\ X2)) \Rightarrow (k3\_funcop\_1\ X0\ X1\ X2 = k3\_relat\_1\ (k13\_funct\_3\ X1\ X2)\ X0))) \tag{2}$$

Theorem 1

$$\forall X0.((v1\_relat\_1\ X0) \wedge (v1\_funct\_1\ X0)) \Rightarrow (\forall X1.((v1\_relat\_1\ X1) \wedge (v1\_funct\_1\ X1)) \Rightarrow (\forall X2.((v1\_relat\_1\ X2) \wedge (v1\_funct\_1\ X2)) \Rightarrow (\forall X3.(X3 \in k9\_xtuple\_0\ (k3\_funcop\_1\ X2\ X0\ X1)) \Rightarrow (k1\_funct\_1\ (k3\_funcop\_1\ X2\ X0\ X1)\ X3 = k1\_binop\_1\ X2\ (k1\_funct\_1\ X0\ X3)\ (k1\_funct\_1\ X1\ X3))))))$$