t84_funct_1 (TMVt8SCvE76z9gHKUcQdG9FutXvHfJw4t7p)

October 27, 2020

Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v2\_funct\_1 : \iota \Rightarrow o$ be given. Let $k7\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_funct\_1 : \iota \Rightarrow \iota$ be given. Let $k4\_relat\_1 : \iota \Rightarrow \iota$ be given. Let $k3\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.k2\_funct\_1\ (k4\_relat\_1\ X0) = k4\_relat\_1\ X0 \tag{1}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge (v1\_funct\_1\ X0)) \Rightarrow (\forall X1.((v1\_relat\_1\ X1) \wedge (v1\_funct\_1\ X1)) \Rightarrow (((v2\_funct\_1\ X0) \wedge (v2\_funct\_1\ X1)) \Rightarrow (k2\_funct\_1\ (k3\_relat\_1\ X0\ X1) = k3\_relat\_1\ (k2\_funct\_1\ X1)\ (k2\_funct\_1\ X0)))) \tag{2}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge (v1\_funct\_1\ X0)) \Rightarrow ((v2\_funct\_1\ X0) \Rightarrow ((k10\_xtuple\_0\ X0 = k9\_xtuple\_0\ (k2\_funct\_1\ X0)) \wedge (k9\_xtuple\_0\ X0 = k10\_xtuple\_0\ (k2\_funct\_1\ X0)))) \tag{3}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ X0) \Rightarrow (\forall X1.(v1\_relat\_1\ X1) \Rightarrow (k9\_xtuple\_0\ (k3\_relat\_1\ X0\ X1) = k8\_relat\_1\ X0\ (k9\_xtuple\_0\ X1))) \tag{4}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ X0) \Rightarrow (\forall X1.(v1\_relat\_1\ X1) \Rightarrow (k10\_xtuple\_0\ (k3\_relat\_1\ X0\ X1) = k7\_relat\_1\ X1\ (k10\_xtuple\_0\ X0))) \tag{5}$$

Assume the following.

$$\forall X0.k10\_xtuple\_0\ (k4\_relat\_1\ X0) = X0 \tag{6}$$

Assume the following.

$$\forall X0.k9\_xtuple\_0\ (k4\_relat\_1\ X0) = X0 \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v2\_funct\_1\ X0)))\wedge((v1\_relat\_1\ X1)\wedge((v1\_funct\_1\ X1)\wedge(v2\_funct\_1\ X1))))\Rightarrow((v1\_relat\_1\ (k3\_relat\_1\ X0\ X1))\wedge(v2\_funct\_1\ (k3\_relat\_1\ X0\ X1))) \tag{8}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v2\_funct\_1\ X0)))\Rightarrow((v1\_relat\_1\ (k2\_funct\_1\ X0))\wedge((v1\_funct\_1\ (k2\_funct\_1\ X0))\wedge(v2\_funct\_1\ (k2\_funct\_1\ X0)))) \tag{9}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ (k4\_relat\_1\ X0))\wedge(v2\_funct\_1\ (k4\_relat\_1\ X0)) \tag{10}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ (k4\_relat\_1\ X0))\wedge(v1\_funct\_1\ (k4\_relat\_1\ X0)) \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_relat\_1\ X0)\wedge(v1\_funct\_1\ X0))\wedge((v1\_relat\_1\ X1)\wedge(v1\_funct\_1\ X1)))\Rightarrow((v1\_relat\_1\ (k3\_relat\_1\ X0\ X1))\wedge(v1\_funct\_1\ (k3\_relat\_1\ X0\ X1))) \tag{12}$$

Assume the following.

$$\forall X0.v1\_relat\_1\ (k4\_relat\_1\ X0) \tag{13}$$

Assume the following.

$$\forall X0.\forall X1.v1\_relat\_1\ (k3\_relat\_1\ X0\ X1) \tag{14}$$

Theorem 1

$$\forall X0.\forall X1.((v1\_relat\_1\ X1)\wedge(v1\_funct\_1\ X1))\Rightarrow((v2\_funct\_1\ X1)\Rightarrow(k7\_relat\_1\ X1\ X0 = k8\_relat\_1\ (k2\_funct\_1\ X1)\ X0))$$