t7_scmpds_3 (TMLBfW4Qs3ER4Jz3qoXUxyfuyqLQ5eSEDEK)

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Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_scmpds\_2 : \iota$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v5\_funct\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_2 : \iota$ be given. Let $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_funct\_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_ami\_2 : \iota$ be given. Let $v2\_xxreal\_0 : \iota \Rightarrow o$ be given. Let $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_numbers : \iota$ be given. Let $k5\_numbers : \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $k4\_ordinal1 : \iota$ be given. Let $l1\_extpro\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1\_compos\_1 : \iota \Rightarrow o$ be given. Let $v1\_setfam\_1 : \iota \Rightarrow o$ be given. Let $v1\_extpro\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$((v2\_xxreal\_0\ np\_\_2) \wedge (m2\_subset\_1\ np\_\_2\ k1\_numbers\ k5\_numbers)) \wedge ((m1\_subset\_1\ np\_\_2\ k5\_numbers) \wedge (m1\_subset\_1\ np\_\_2\ k1\_numbers)) \tag{1}$$

Assume the following.

$$\neg v1\_xboole\_0\ np\_\_2 \tag{2}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v1\_relat\_1\ X1) \wedge ((v4\_relat\_1\ X1\ X0) \wedge ((v1\_funct\_1\ X1) \wedge (v1\_partfun1\ X1\ X0)))) \wedge ((v1\_relat\_1\ X2) \wedge ((v4\_relat\_1\ X2\ X0) \wedge (v1\_funct\_1\ X2)))) \Rightarrow ((v1\_relat\_1\ (k1\_funct\_4\ X1\ X2)) \wedge ((v4\_relat\_1\ (k1\_funct\_4\ X1\ X2)\ X0) \wedge ((v1\_funct\_1\ (k1\_funct\_4\ X1\ X2)) \wedge (v1\_partfun1\ (k1\_funct\_4\ X1\ X2)\ X0)))) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X0) \wedge (v1\_funct\_1\ X0)) \Rightarrow ((v1\_relat\_1\ (k5\_relat\_1\ X0\ X1)) \wedge (v1\_funct\_1\ (k5\_relat\_1\ X0\ X1))) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v1\_relat\_1\ X1)\wedge((v4\_relat\_1\ X1\ X0)\wedge(v1\_funct\_1\ X1)))\wedge((v1\_relat\_1\ X2)\wedge((v4\_relat\_1\ X2\ X0)\wedge(v1\_funct\_1\ X2))))\Rightarrow((v1\_relat\_1\ (k1\_funct\_4\ X1\ X2))\wedge((v4\_relat\_1\ (k1\_funct\_4\ X1\ X2)\ X0)\wedge(v1\_funct\_1\ (k1\_funct\_4\ X1\ X2)))) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1\_relat\_1\ X2)\wedge(v4\_relat\_1\ X2\ X1))\Rightarrow((v1\_relat\_1\ (k5\_relat\_1\ X2\ X0))\wedge((v4\_relat\_1\ (k5\_relat\_1\ X2\ X0)\ X0)\wedge(v4\_relat\_1\ (k5\_relat\_1\ X2\ X0)\ X1))) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v1\_relat\_1\ X1)\wedge(v1\_funct\_1\ X1))\wedge((v1\_relat\_1\ X2)\wedge((v1\_funct\_1\ X2)\wedge(v5\_funct\_1\ X2\ X1))))\Rightarrow((v1\_relat\_1\ (k5\_relat\_1\ X2\ X0))\wedge(v5\_funct\_1\ (k5\_relat\_1\ X2\ X0)\ X1)) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v1\_relat\_1\ X0)\wedge(v1\_funct\_1\ X0))\wedge(((v1\_relat\_1\ X1)\wedge((v1\_funct\_1\ X1)\wedge(v5\_funct\_1\ X1\ X0)))\wedge((v1\_relat\_1\ X2)\wedge((v1\_funct\_1\ X2)\wedge(v5\_funct\_1\ X2\ X0)))))\Rightarrow((v1\_relat\_1\ (k1\_funct\_4\ X1\ X2))\wedge((v1\_funct\_1\ (k1\_funct\_4\ X1\ X2))\wedge(v5\_funct\_1\ (k1\_funct\_4\ X1\ X2)\ X0))) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.(l1\_extpro\_1\ X1\ X0)\Rightarrow((l1\_memstr\_0\ X1\ X0)\wedge(l1\_compos\_1\ X1)) \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.(v1\_relat\_1\ X0)\Rightarrow(v1\_relat\_1\ (k5\_relat\_1\ X0\ X1)) \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_setfam\_1\ X0)\wedge(l1\_memstr\_0\ X1\ X0))\Rightarrow((v1\_relat\_1\ (k2\_memstr\_0\ X0\ X1))\wedge((v4\_relat\_1\ (k2\_memstr\_0\ X0\ X1)\ (u1\_struct\_0\ X1))\wedge((v1\_funct\_1\ (k2\_memstr\_0\ X0\ X1))\wedge(v1\_partfun1\ (k2\_memstr\_0\ X0\ X1)\ (u1\_struct\_0\ X1))))) \tag{12}$$

Assume the following.

$$(v1\_extpro\_1\ k1\_scmpds\_2\ np\_\_2)\wedge(l1\_extpro\_1\ k1\_scmpds\_2\ np\_\_2) \tag{13}$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_relat\_1\ X0)\wedge(v1\_funct\_1\ X0))\wedge((v1\_relat\_1\ X1)\wedge(v1\_funct\_1\ X1)))\Rightarrow((v1\_relat\_1\ (k1\_funct\_4\ X0\ X1))\wedge(v1\_funct\_1\ (k1\_funct\_4\ X0\ X1))) \tag{14}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k4\_ordinal1)\Rightarrow(v7\_ordinal1\ X0) \tag{15}$$

Assume the following.

$$\forall X0.((\neg v1\_xboole\_0\ X0)\wedge(v7\_ordinal1\ X0))\Rightarrow((\neg v1\_xboole\_0\ X0)\wedge((v7\_ordinal1\ X0)\wedge(\neg v1\_setfam\_1\ X0))) \tag{16}$$

Theorem 1

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ (u1\_struct\_0\ k1\_scmpds\_2))\wedge((v1\_funct\_1\ X0)\wedge((v5\_funct\_1\ X0\ (k2\_memstr\_0\ np\_\_2\ k1\_scmpds\_2))\wedge(v1\_partfun1\ X0\ (u1\_struct\_0\ k1\_scmpds\_2))))))\Rightarrow(\forall X1.((v1\_relat\_1\ X1)\wedge((v4\_relat\_1\ X1\ (u1\_struct\_0\ k1\_scmpds\_2))\wedge((v1\_funct\_1\ X1)\wedge((v5\_funct\_1\ X1\ (k2\_memstr\_0\ np\_\_2\ k1\_scmpds\_2))\wedge(v1\_partfun1\ X1\ (u1\_struct\_0\ k1\_scmpds\_2))))))\Rightarrow((v1\_relat\_1\ (k1\_funct\_4\ X0\ (k5\_relat\_1\ X1\ k2\_ami\_2)))\wedge((v4\_relat\_1\ (k1\_funct\_4\ X0\ (k5\_relat\_1\ X1\ k2\_ami\_2))\ (u1\_struct\_0\ k1\_scmpds\_2))\wedge((v1\_funct\_1\ (k1\_funct\_4\ X0\ (k5\_relat\_1\ X1\ k2\_ami\_2)))\wedge((v5\_funct\_1\ (k1\_funct\_4\ X0\ (k5\_relat\_1\ X1\ k2\_ami\_2))\ (k2\_memstr\_0\ np\_\_2\ k1\_scmpds\_2))\wedge(v1\_partfun1\ (k1\_funct\_4\ X0\ (k5\_relat\_1\ X1\ k2\_ami\_2))\ (u1\_struct\_0\ k1\_scmpds\_2)))))))$$