t1_mod_2 (TMYVveA1DBZm5y427eZiLuWAY6DX97rEjPM)

October 27, 2020

Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v13\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v3\_group\_1 : \iota \Rightarrow o$ be given. Let $v4\_vectsp\_1 : \iota \Rightarrow o$ be given. Let $v5\_vectsp\_1 : \iota \Rightarrow o$ be given. Let $v2\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v3\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v4\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $l6\_algstr\_0 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_mod\_2 : \iota \Rightarrow \iota$ be given. Let $k4\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k3\_algstr\_0 : \iota$ be given. Let $k1\_xboole\_0 : \iota$ be given. Let $k3\_rlvect\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_funct\_5 : \iota$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $g2\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1\_struct\_0 : \iota \Rightarrow o$ be given. Let $g1\_vectsp\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v13\_struct\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np\_\_1 : \iota$ be given. Let $v8\_algstr\_0 : \iota \Rightarrow o$ be given. Let $l2\_algstr\_0 : \iota \Rightarrow o$ be given. Let $l5\_algstr\_0 : \iota \Rightarrow o$ be given. Let $l4\_algstr\_0 : \iota \Rightarrow o$ be given. Let $l4\_struct\_0 : \iota \Rightarrow o$ be given. Let $l2\_struct\_0 : \iota \Rightarrow o$ be given. Let $l3\_struct\_0 : \iota \Rightarrow o$ be given. Let $l1\_algstr\_0 : \iota \Rightarrow o$ be given. Let $l1\_vectsp\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9\_funct\_5 : \iota$ be given. Let $v7\_vectsp\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v8\_vectsp\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v9\_vectsp\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v10\_vectsp\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v11\_vectsp\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10\_funct\_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1\_algstr\_0 : \iota \Rightarrow \iota$ be given. Let $u2\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $u1\_vectsp\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$(\forall X0.(m1\_subset\_1\ X0\ (u1\_struct\_0\ k3\_algstr\_0)) \Rightarrow (X0 = k1\_xboole\_0)) \wedge ((\forall X0.(m1\_subset\_1\ X0\ (u1\_struct\_0\ k3\_algstr\_0)) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ k3\_algstr\_0)) \Rightarrow (k3\_rlvect\_1\ k3\_algstr\_0\ X0\ X1 = k1\_xboole\_0))) \wedge ((\forall X0.(m1\_subset\_1\ X0\ (u1\_struct\_0\ k3\_algstr\_0)) \Rightarrow (k4\_algstr\_0\ k3\_algstr\_0\ X0 = k1\_xboole\_0)) \wedge (k4\_struct\_0\ k3\_algstr\_0 = k1\_xboole\_0))) \tag{1}$$

Assume the following.

$$k5\_funct\_5 = k1\_xboole\_0 \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v1\_funct\_1\ X1)\wedge((v1\_funct\_2\ X1\ (k2\_zfmisc\_1\ X0\ X0)\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)\ X0)))))\wedge(m1\_subset\_1\ X2\ X0))\Rightarrow(\forall X3.\forall X4.\forall X5.(g2\_algstr\_0\ X0\ X1\ X2 = g2\_algstr\_0\ X3\ X4\ X5)\Rightarrow((X0 = X3)\wedge((X1 = X4)\wedge(X2 = X5))))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((l1\_struct\_0\ X0)\wedge(((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ (k2\_zfmisc\_1\ X1\ X1)\ X1)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ X1\ X1)\ X1)))))\wedge((m1\_subset\_1\ X3\ X1)\wedge((v1\_funct\_1\ X4)\wedge((v1\_funct\_2\ X4\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ X1)\ X1)\wedge(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ X1)\ X1)))))))))\Rightarrow(\forall X5.\forall X6.\forall X7.\forall X8.\forall X9.(g1\_vectsp\_1\ X0\ X1\ X2\ X3\ X4 = g1\_vectsp\_1\ X5\ X6\ X7\ X8\ X9)\Rightarrow((X0 = X5)\wedge((X1 = X6)\wedge((X2 = X7)\wedge((X3 = X8)\wedge(X4 = X9)))))) \tag{4}$$

Assume the following.

$$(v13\_struct\_0\ k3\_algstr\_0\ np\_\_1)\wedge(v8\_algstr\_0\ k3\_algstr\_0) \tag{5}$$

Assume the following.

$$\forall X0.(l6\_algstr\_0\ X0)\Rightarrow((l2\_algstr\_0\ X0)\wedge(l5\_algstr\_0\ X0)) \tag{6}$$

Assume the following.

$$\forall X0.(l5\_algstr\_0\ X0)\Rightarrow((l4\_algstr\_0\ X0)\wedge(l4\_struct\_0\ X0)) \tag{7}$$

Assume the following.

$$\forall X0.(l4\_struct\_0\ X0)\Rightarrow((l2\_struct\_0\ X0)\wedge(l3\_struct\_0\ X0)) \tag{8}$$

Assume the following.

$$\forall X0.(l3\_struct\_0\ X0)\Rightarrow(l1\_struct\_0\ X0) \tag{9}$$

Assume the following.

$$\forall X0.(l2\_algstr\_0\ X0)\Rightarrow((l2\_struct\_0\ X0)\wedge(l1\_algstr\_0\ X0)) \tag{10}$$

Assume the following.

$$\forall X0.(l1\_struct\_0\ X0)\Rightarrow(\forall X1.(l1\_vectsp\_1\ X1\ X0)\Rightarrow(l2\_algstr\_0\ X1)) \tag{11}$$

Assume the following.

$$(v1\_funct\_1\ k9\_funct\_5)\wedge((v1\_funct\_2\ k9\_funct\_5\ (k2\_zfmisc\_1\ np\_\_1\ np\_\_1)\ np\_\_1)\wedge(m1\_subset\_1\ k9\_funct\_5\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ np\_\_1\ np\_\_1)\ np\_\_1)))) \tag{12}$$

Assume the following.

$$m1\_subset\_1\ k5\_funct\_5\ np\_\_1 \tag{13}$$

Assume the following.

$$\forall X0.(l2\_struct\_0\ X0)\Rightarrow(m1\_subset\_1\ (k4\_struct\_0\ X0)\ (u1\_struct\_0\ X0)) \tag{14}$$

Assume the following.

$$l2\_algstr\_0\ k3\_algstr\_0 \tag{15}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge(l6\_algstr\_0\ X0)))))))))\Rightarrow((\neg v2\_struct\_0\ (k1\_mod\_2\ X0))\wedge((v13\_algstr\_0\ (k1\_mod\_2\ X0))\wedge((v7\_vectsp\_1\ (k1\_mod\_2\ X0)\ X0)\wedge((v8\_vectsp\_1\ (k1\_mod\_2\ X0)\ X0)\wedge((v9\_vectsp\_1\ (k1\_mod\_2\ X0)\ X0)\wedge((v10\_vectsp\_1\ (k1\_mod\_2\ X0)\ X0)\wedge((v11\_vectsp\_1\ (k1\_mod\_2\ X0)\ X0)\wedge((v2\_rlvect\_1\ (k1\_mod\_2\ X0))\wedge((v3\_rlvect\_1\ (k1\_mod\_2\ X0))\wedge((v4\_rlvect\_1\ (k1\_mod\_2\ X0))\wedge(l1\_vectsp\_1\ (k1\_mod\_2\ X0)\ X0)))))))))))) \tag{16}$$

Assume the following.

$$\forall X0.\forall X1.(v1\_funct\_1\ (k10\_funct\_3\ X0\ X1))\wedge((v1\_funct\_2\ (k10\_funct\_3\ X0\ X1)\ (k2\_zfmisc\_1\ X0\ X1)\ X1)\wedge(m1\_subset\_1\ (k10\_funct\_3\ X0\ X1)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)\ X1)))) \tag{17}$$

Assume the following.

$$k3\_algstr\_0 = g2\_algstr\_0\ np\_\_1\ k9\_funct\_5\ k5\_funct\_5 \tag{18}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge(l6\_algstr\_0\ X0)))))))))\Rightarrow(k1\_mod\_2\ X0 = g1\_vectsp\_1\ X0\ np\_\_1\ k9\_funct\_5\ k5\_funct\_5\ (k10\_funct\_3\ (u1\_struct\_0\ X0)\ np\_\_1)) \tag{19}$$

Assume the following.

$$\forall X0.(l2\_algstr\_0\ X0)\Rightarrow((v8\_algstr\_0\ X0)\Rightarrow(X0 = g2\_algstr\_0\ (u1\_struct\_0\ X0)\ (u1\_algstr\_0\ X0)\ (u2\_struct\_0\ X0))) \tag{20}$$

Assume the following.

$$\forall X0.\forall X1.((l1\_struct\_0\ X0)\wedge(l1\_vectsp\_1\ X1\ X0))\Rightarrow((v7\_vectsp\_1\ X1\ X0)\Rightarrow(X1 = g1\_vectsp\_1\ X0\ (u1\_struct\_0\ X1)\ (u1\_algstr\_0\ X1)\ (u2\_struct\_0\ X1)\ (u1\_vectsp\_1\ X0\ X1))) \tag{21}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge(l6\_algstr\_0\ X0))))))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ (k1\_mod\_2\ X0)))\Rightarrow(X1 = k4\_struct\_0\ (k1\_mod\_2\ X0)))$$