t58_compos_2 (TMS62VteFwf4DFuoAxJt5yMUeDDYhiaoSxW)

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Let $v1\_amistd\_4 : \iota \Rightarrow o$ be given. Let $l1\_compos\_1 : \iota \Rightarrow o$ be given. Let $v6\_compos\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_compos\_1 : \iota \Rightarrow \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_compos\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_compos\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_4 : \iota$ be given. Let $k5\_compos\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_numbers : \iota$ be given. Let $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_finset\_1 : \iota \Rightarrow o$ be given. Let $v1\_afinsq\_1 : \iota \Rightarrow o$ be given. Let $v3\_compos\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4\_compos\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k62\_valued\_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((v1\_amistd\_4\ X0) \wedge (l1\_compos\_1\ X0)) \Rightarrow (\forall X1.((v6\_compos\_0\ X1\ (u1\_compos\_1\ X0)) \wedge (m1\_subset\_1\ X1\ (u1\_compos\_1\ X0))) \Rightarrow (\forall X2.((\neg v1\_xboole\_0\ X2) \wedge ((v1\_relat\_1\ X2) \wedge ((v4\_relat\_1\ X2\ k5\_numbers) \wedge ((v5\_relat\_1\ X2\ (u1\_compos\_1\ X0)) \wedge ((v1\_funct\_1\ X2) \wedge ((v1\_finset\_1\ X2) \wedge ((v1\_afinsq\_1\ X2) \wedge ((v3\_compos\_1\ X2\ X0) \wedge (v4\_compos\_1\ X2\ X0))))))))) \Rightarrow (k1\_funct\_1\ (k2\_compos\_2\ X0\ X2\ X1)\ (k62\_valued\_1\ X2) = k5\_compos\_0\ (u1\_compos\_1\ X0)\ X1\ (k62\_valued\_1\ X2))))) \tag{1}$$

Assume the following.

$$\forall X0.((v1\_amistd\_4\ X0) \wedge (l1\_compos\_1\ X0)) \Rightarrow (\forall X1.((v6\_compos\_0\ X1\ (u1\_compos\_1\ X0)) \wedge (m1\_subset\_1\ X1\ (u1\_compos\_1\ X0))) \Rightarrow (\forall X2.((v6\_compos\_0\ X2\ (u1\_compos\_1\ X0)) \wedge (m1\_subset\_1\ X2\ (u1\_compos\_1\ X0))) \Rightarrow (\forall X3.((v6\_compos\_0\ X3\ (u1\_compos\_1\ X0)) \wedge (m1\_subset\_1\ X3\ (u1\_compos\_1\ X0))) \Rightarrow (\forall X4.((v6\_compos\_0\ X4\ (u1\_compos\_1\ X0)) \wedge (m1\_subset\_1\ X4\ (u1\_compos\_1\ X0))) \Rightarrow (k62\_valued\_1\ (k2\_compos\_2\ X0\ (k2\_compos\_2\ X0\ (k3\_compos\_2\ X0\ X1\ X2)\ X3)\ X4) = np\_\_4))))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v1\_amistd\_4\ X0)\wedge(l1\_compos\_1\ X0))\wedge(((v6\_compos\_0\ X1\ (u1\_compos\_1\ X0))\wedge(m1\_subset\_1\ X1\ (u1\_compos\_1\ X0)))\wedge((v6\_compos\_0\ X2\ (u1\_compos\_1\ X0))\wedge(m1\_subset\_1\ X2\ (u1\_compos\_1\ X0)))))\Rightarrow((\neg v1\_xboole\_0\ (k3\_compos\_2\ X0\ X1\ X2))\wedge((v1\_relat\_1\ (k3\_compos\_2\ X0\ X1\ X2))\wedge((v4\_relat\_1\ (k3\_compos\_2\ X0\ X1\ X2)\ k5\_numbers)\wedge((v5\_relat\_1\ (k3\_compos\_2\ X0\ X1\ X2)\ (u1\_compos\_1\ X0))\wedge((v1\_funct\_1\ (k3\_compos\_2\ X0\ X1\ X2))\wedge((v1\_finset\_1\ (k3\_compos\_2\ X0\ X1\ X2))\wedge((v1\_afinsq\_1\ (k3\_compos\_2\ X0\ X1\ X2))\wedge((v3\_compos\_1\ (k3\_compos\_2\ X0\ X1\ X2)\ X0)\wedge(v4\_compos\_1\ (k3\_compos\_2\ X0\ X1\ X2)\ X0)))))))))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v1\_amistd\_4\ X0)\wedge(l1\_compos\_1\ X0))\wedge(((\neg v1\_xboole\_0\ X1)\wedge((v1\_relat\_1\ X1)\wedge((v4\_relat\_1\ X1\ k5\_numbers)\wedge((v5\_relat\_1\ X1\ (u1\_compos\_1\ X0))\wedge((v1\_funct\_1\ X1)\wedge((v1\_finset\_1\ X1)\wedge((v1\_afinsq\_1\ X1)\wedge((v3\_compos\_1\ X1\ X0)\wedge(v4\_compos\_1\ X1\ X0)))))))))\wedge((v6\_compos\_0\ X2\ (u1\_compos\_1\ X0))\wedge(m1\_subset\_1\ X2\ (u1\_compos\_1\ X0)))))\Rightarrow((\neg v1\_xboole\_0\ (k2\_compos\_2\ X0\ X1\ X2))\wedge((v1\_relat\_1\ (k2\_compos\_2\ X0\ X1\ X2))\wedge((v4\_relat\_1\ (k2\_compos\_2\ X0\ X1\ X2)\ k5\_numbers)\wedge((v5\_relat\_1\ (k2\_compos\_2\ X0\ X1\ X2)\ (u1\_compos\_1\ X0))\wedge((v1\_funct\_1\ (k2\_compos\_2\ X0\ X1\ X2))\wedge((v1\_finset\_1\ (k2\_compos\_2\ X0\ X1\ X2))\wedge((v1\_afinsq\_1\ (k2\_compos\_2\ X0\ X1\ X2))\wedge((v3\_compos\_1\ (k2\_compos\_2\ X0\ X1\ X2)\ X0)\wedge(v4\_compos\_1\ (k2\_compos\_2\ X0\ X1\ X2)\ X0)))))))))) \tag{4}$$

Theorem 1

$$\forall X0.((v1\_amistd\_4\ X0)\wedge(l1\_compos\_1\ X0))\Rightarrow(\forall X1.((v6\_compos\_0\ X1\ (u1\_compos\_1\ X0))\wedge(m1\_subset\_1\ X1\ (u1\_compos\_1\ X0)))\Rightarrow(\forall X2.((v6\_compos\_0\ X2\ (u1\_compos\_1\ X0))\wedge(m1\_subset\_1\ X2\ (u1\_compos\_1\ X0)))\Rightarrow(\forall X3.((v6\_compos\_0\ X3\ (u1\_compos\_1\ X0))\wedge(m1\_subset\_1\ X3\ (u1\_compos\_1\ X0)))\Rightarrow(\forall X4.((v6\_compos\_0\ X4\ (u1\_compos\_1\ X0))\wedge(m1\_subset\_1\ X4\ (u1\_compos\_1\ X0)))\Rightarrow(\forall X5.((v6\_compos\_0\ X5\ (u1\_compos\_1\ X0))\wedge(m1\_subset\_1\ X5\ (u1\_compos\_1\ X0)))\Rightarrow(k1\_funct\_1\ (k2\_compos\_2\ X0\ (k2\_compos\_2\ X0\ (k2\_compos\_2\ X0\ (k3\_compos\_2\ X0\ X1\ X2)\ X3)\ X4)\ X5)\ np\_\_4 = k5\_compos\_0\ (u1\_compos\_1\ X0)\ X5\ np\_\_4))))))$$