t18_compos_1 (TMVY5FZ72usWwJctM5pHL5wUvJQ97WANhcg)

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Let $l1\_compos\_1 : \iota \Rightarrow o$ 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 $u1\_compos\_1 : \iota \Rightarrow \iota$ 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 $r1\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_afinsq\_1 : \iota \Rightarrow \iota$ be given. Let $k63\_valued\_1 : \iota \Rightarrow \iota$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k6\_compos\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_nat\_d : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_card\_1 : \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $k61\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_compos\_1 : \iota \Rightarrow \iota$ be given. Let $k1\_card\_1 : \iota \Rightarrow \iota$ be given. Let $k1\_tarski : \iota \Rightarrow \iota$ be given. Let $k6\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_xreal\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $v1\_compos\_1 : \iota \Rightarrow o$ be given. Let $v1\_card\_1 : \iota \Rightarrow o$ be given. Let $k5\_compos\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3\_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v4\_relat\_1\ X0\ k5\_numbers) \wedge ((v1\_funct\_1\ X0) \wedge ((v1\_finset\_1\ X0) \wedge (v1\_afinsq\_1\ X0))))) \Rightarrow (\forall X1.((v1\_relat\_1\ X1) \wedge (v1\_funct\_1\ X1)) \Rightarrow (r1\_xboole\_0\ (k2\_afinsq\_1\ X0)\ (k9\_xtuple\_0\ (k61\_valued\_1\ X1\ (k5\_card\_1\ X0))))) \tag{1}$$

Assume the following.

$$\forall X0.(l1\_compos\_1\ X0) \Rightarrow (k5\_card\_1\ (k4\_compos\_1\ X0) = np\_\_1) \tag{2}$$

Assume the following.

$$\forall X0.(k1\_card\_1\ X0 = np\_\_1) \Leftrightarrow (\exists X1.X0 = k1\_tarski\ X1) \tag{3}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v4\_relat\_1\ X0\ k5\_numbers) \wedge ((v1\_funct\_1\ X0) \wedge ((\neg v1\_xboole\_0\ X0) \wedge (v1\_finset\_1\ X0))))) \Rightarrow (k5\_card\_1\ (k63\_valued\_1\ X0) = k6\_xcmplx\_0\ (k5\_card\_1\ X0)\ np\_\_1) \tag{4}$$

Assume the following.

$$\forall X0.((\neg v1\_xboole\_0\ X0)\wedge(v1\_finset\_1\ X0))\Rightarrow(k6\_xcmplx\_0\ (k5\_card\_1\ X0)\ np\_\_1 = k1\_xreal\_0\ (k5\_card\_1\ X0)\ np\_\_1) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1\ X0)\wedge(v7\_ordinal1\ X1))\Rightarrow(k7\_nat\_d\ X0\ X1 = k1\_xreal\_0\ X0\ X1) \tag{6}$$

Assume the following.

$$\forall X0.(v1\_finset\_1\ X0)\Rightarrow(k5\_card\_1\ X0 = k1\_card\_1\ X0) \tag{7}$$

Assume the following.

$$\exists X0.(l1\_compos\_1\ X0)\wedge(v1\_compos\_1\ X0) \tag{8}$$

Assume the following.

$$\forall X0.(v1\_finset\_1\ X0)\Rightarrow((v1\_finset\_1\ (k1\_card\_1\ X0))\wedge(v1\_card\_1\ (k1\_card\_1\ X0))) \tag{9}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v1\_funct\_1\ X0)\wedge((\neg v1\_xboole\_0\ X0)\wedge((v1\_finset\_1\ X0)\wedge(v1\_afinsq\_1\ X0))))))\Rightarrow((v1\_relat\_1\ (k63\_valued\_1\ X0))\wedge((v1\_funct\_1\ (k63\_valued\_1\ X0))\wedge(v1\_afinsq\_1\ (k63\_valued\_1\ X0)))) \tag{10}$$

Assume the following.

$$\forall X0.(l1\_compos\_1\ X0)\Rightarrow((\neg v1\_xboole\_0\ (k4\_compos\_1\ X0))\wedge((v1\_relat\_1\ (k4\_compos\_1\ X0))\wedge((v4\_relat\_1\ (k4\_compos\_1\ X0)\ k5\_numbers)\wedge((v5\_relat\_1\ (k4\_compos\_1\ X0)\ (u1\_compos\_1\ X0))\wedge((v1\_funct\_1\ (k4\_compos\_1\ X0))\wedge((v1\_finset\_1\ (k4\_compos\_1\ X0))\wedge(v1\_afinsq\_1\ (k4\_compos\_1\ X0)))))))) \tag{11}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v1\_funct\_1\ X0)\wedge((\neg v1\_xboole\_0\ X0)\wedge(v1\_finset\_1\ X0)))))\Rightarrow((v1\_relat\_1\ (k63\_valued\_1\ X0))\wedge((v4\_relat\_1\ (k63\_valued\_1\ X0)\ k5\_numbers)\wedge((v1\_funct\_1\ (k63\_valued\_1\ X0))\wedge(v1\_finset\_1\ (k63\_valued\_1\ X0))))) \tag{12}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v1\_funct\_1\ X0)\wedge((\neg v1\_xboole\_0\ X0)\wedge(v1\_finset\_1\ X0)))))\Rightarrow((v1\_relat\_1\ (k63\_valued\_1\ X0))\wedge(v1\_funct\_1\ (k63\_valued\_1\ X0))) \tag{13}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((l1\_compos\_1\ X0)\wedge(((v1\_relat\_1\ X1)\wedge((v4\_relat\_1\ X1\ k5\_numbers)\wedge((v5\_relat\_1\ X1\ (u1\_compos\_1\ X0))\wedge((v1\_funct\_1\ X1)\wedge(v1\_finset\_1\ X1)))))\wedge(v7\_ordinal1\ X2)))\Rightarrow((v1\_relat\_1\ (k5\_compos\_1\ X0\ X1\ X2))\wedge((v4\_relat\_1\ (k5\_compos\_1\ X0\ X1\ X2)\ k5\_numbers)\wedge((v5\_relat\_1\ (k5\_compos\_1\ X0\ X1\ X2)\ (u1\_compos\_1\ X0))\wedge((v1\_funct\_1\ (k5\_compos\_1\ X0\ X1\ X2))\wedge(v1\_finset\_1\ (k5\_compos\_1\ X0\ X1\ X2))))))) \tag{14}$$

Assume the following.

$$\forall X0.v1\_card\_1\ (k1\_card\_1\ X0) \tag{15}$$

Assume the following.

$$\forall X0.(l1\_compos\_1\ X0)\Rightarrow(\forall X1.((v1\_relat\_1\ X1)\wedge((v4\_relat\_1\ X1\ k5\_numbers)\wedge((v5\_relat\_1\ X1\ (u1\_compos\_1\ X0))\wedge((v1\_funct\_1\ X1)\wedge(v1\_finset\_1\ X1)))))\Rightarrow(\forall X2.(v7\_ordinal1\ X2)\Rightarrow(k6\_compos\_1\ X0\ X1\ X2 = k61\_valued\_1\ (k5\_compos\_1\ X0\ X1\ X2)\ X2))) \tag{16}$$

Assume the following.

$$\forall X0.((v3\_ordinal1\ X0)\wedge(v1\_finset\_1\ X0))\Rightarrow(v7\_ordinal1\ X0) \tag{17}$$

Assume the following.

$$\forall X0.(v1\_card\_1\ X0)\Rightarrow(v3\_ordinal1\ X0) \tag{18}$$

Theorem 1

$$\forall X0.(l1\_compos\_1\ X0)\Rightarrow(\forall X1.((\neg v1\_xboole\_0\ X1)\wedge((v1\_relat\_1\ X1)\wedge((v4\_relat\_1\ X1\ k5\_numbers)\wedge((v5\_relat\_1\ X1\ (u1\_compos\_1\ X0))\wedge((v1\_funct\_1\ X1)\wedge((v1\_finset\_1\ X1)\wedge(v1\_afinsq\_1\ X1)))))))\Rightarrow(\forall X2.((\neg v1\_xboole\_0\ X2)\wedge((v1\_relat\_1\ X2)\wedge((v4\_relat\_1\ X2\ k5\_numbers)\wedge((v5\_relat\_1\ X2\ (u1\_compos\_1\ X0))\wedge((v1\_funct\_1\ X2)\wedge(v1\_finset\_1\ X2)))))))\Rightarrow(r1\_xboole\_0\ (k2\_afinsq\_1\ (k63\_valued\_1\ X1))\ (k9\_xtuple\_0\ (k6\_compos\_1\ X0\ X2\ (k7\_nat\_d\ (k5\_card\_1\ X1)\ np\_\_1))))))$$