# l74_scmpds_6 (TMaMQyx1x2tGPbqZvuwMdH7LcxMtcAP7CRz)

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Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_compos\_1 : \iota \Rightarrow \iota$ be given. Let $k1\_scmpds\_2 : \iota$ 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 $k5\_card\_1 : \iota \Rightarrow \iota$ be given. Let $k1\_scmpds\_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_scmpds\_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_2 : \iota$ be given. Let $k2\_scmpds\_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $v1\_xcmplx\_0 : \iota \Rightarrow o$ be given. Let $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k4\_ordinal1 : \iota$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $v1\_xreal\_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ (u1\_compos\_1\ k1\_scmpds\_2)) \Rightarrow (\forall X1.((\neg v1\_xboole\_0\ X1) \wedge ((v1\_relat\_1\ X1) \wedge ((v4\_relat\_1\ X1\ k5\_numbers) \wedge ((v5\_relat\_1\ X1\ (u1\_compos\_1\ k1\_scmpds\_2)) \wedge ((v1\_funct\_1\ X1) \wedge ((v1\_finset\_1\ X1) \wedge (v1\_afinsq\_1\ X1)))))) \Rightarrow (k5\_card\_1\ (k2\_scmpds\_4\ X0\ X1) = k2\_nat\_1\ (k5\_card\_1\ X1)\ np\_\_1)) \tag{1}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ (u1\_compos\_1\ k1\_scmpds\_2)) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_compos\_1\ k1\_scmpds\_2)) \Rightarrow (\forall X2.((\neg v1\_xboole\_0\ X2) \wedge ((v1\_relat\_1\ X2) \wedge ((v4\_relat\_1\ X2\ k5\_numbers) \wedge ((v5\_relat\_1\ X2\ (u1\_compos\_1\ k1\_scmpds\_2)) \wedge ((v1\_funct\_1\ X2) \wedge ((v1\_finset\_1\ X2) \wedge (v1\_afinsq\_1\ X2)))))) \Rightarrow (k1\_scmpds\_4\ (k4\_scmpds\_4\ X0\ X1)\ X2 = k2\_scmpds\_4\ X0\ (k2\_scmpds\_4\ X1\ X2)))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1\_xcmplx\_0\ X0) \wedge ((v1\_xcmplx\_0\ X1) \wedge (v1\_xcmplx\_0\ X2))) \Rightarrow (k2\_xcmplx\_0\ (k2\_xcmplx\_0\ X0\ X1)\ X2 = k2\_xcmplx\_0\ X0\ (k2\_xcmplx\_0\ X1\ X2)) \tag{3}$$

Assume the following.

$$((v2\_xxreal\_0\ np\_\_1)\wedge(m2\_subset\_1\ np\_\_1\ k1\_numbers\ k5\_numbers))\wedge((m1\_subset\_1\ np\_\_1\ k5\_numbers)\wedge(m1\_subset\_1\ np\_\_1\ k1\_numbers)) \tag{4}$$

Assume the following.

$$k2\_xcmplx\_0\ np\_\_1\ np\_\_1 = np\_\_2 \tag{5}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k5\_numbers)\wedge(v7\_ordinal1\ X1))\Rightarrow(k2\_nat\_1\ X0\ X1 = k2\_xcmplx\_0\ X0\ X1) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1\ X0)\wedge(v7\_ordinal1\ X1))\Rightarrow(v7\_ordinal1\ (k2\_xcmplx\_0\ X0\ X1)) \tag{8}$$

Assume the following.

$$\forall X0.(v1\_finset\_1\ X0)\Rightarrow(m1\_subset\_1\ (k5\_card\_1\ X0)\ k4\_ordinal1) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ (u1\_compos\_1\ k1\_scmpds\_2))\wedge((\neg v1\_xboole\_0\ X1)\wedge((v1\_relat\_1\ X1)\wedge((v4\_relat\_1\ X1\ k5\_numbers)\wedge((v5\_relat\_1\ X1\ (u1\_compos\_1\ k1\_scmpds\_2))\wedge((v1\_funct\_1\ X1)\wedge((v1\_finset\_1\ X1)\wedge(v1\_afinsq\_1\ X1)))))))\Rightarrow((\neg v1\_xboole\_0\ (k2\_scmpds\_4\ X0\ X1))\wedge((v1\_relat\_1\ (k2\_scmpds\_4\ X0\ X1))\wedge((v4\_relat\_1\ (k2\_scmpds\_4\ X0\ X1)\ k5\_numbers)\wedge((v5\_relat\_1\ (k2\_scmpds\_4\ X0\ X1)\ (u1\_compos\_1\ k1\_scmpds\_2))\wedge((v1\_funct\_1\ (k2\_scmpds\_4\ X0\ X1))\wedge((v1\_finset\_1\ (k2\_scmpds\_4\ X0\ X1))\wedge(v1\_afinsq\_1\ (k2\_scmpds\_4\ X0\ X1))))))) \tag{10}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k4\_ordinal1)\Rightarrow(v7\_ordinal1\ X0) \tag{11}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(v1\_xcmplx\_0\ X0) \tag{12}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(v1\_xreal\_0\ X0) \tag{13}$$

**Theorem 1**

$$\forall X0.(m1\_subset\_1\ X0\ (u1\_compos\_1\ k1\_scmpds\_2))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_compos\_1\ k1\_scmpds\_2))\Rightarrow(\forall X2.((\neg v1\_xboole\_0\ X2)\wedge((v1\_relat\_1\ X2)\wedge((v4\_relat\_1\ X2\ k5\_numbers)\wedge((v5\_relat\_1\ X2\ (u1\_compos\_1\ k1\_scmpds\_2))\wedge((v1\_funct\_1\ X2)\wedge((v1\_finset\_1\ X2)\wedge(v1\_afinsq\_1\ X2))))))\Rightarrow(k5\_card\_1\ (k1\_scmpds\_4\ (k4\_scmpds\_4\ X0\ X1)\ X2) = k2\_nat\_1\ (k5\_card\_1\ X2)\ np\_\_2)))$$