t35_scmpds_6 (TMaRyKq6BoQoU9GyySfETNopD86U77xdfxX)

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Let $v1\_ami\_2 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_scmpds\_2 : \iota$ be given. Let $v1\_int\_1 : \iota \Rightarrow o$ 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 $k5\_card\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_scmpds\_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_2 : \iota$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ 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 $np\_\_1 : \iota$ be given. Let $k4\_ordinal1 : \iota$ be given. Let $k1\_scmpds\_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_scmpds\_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_scmpds\_6 : \iota \Rightarrow \iota$ be given. Let $v3\_ordinal1 : \iota \Rightarrow o$ be given. Let $k7\_scmpds\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.\neg(X0 \in X1) \wedge ((m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X2)) \wedge (v1\_xboole\_0\ X2)) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ X1) \Rightarrow ((v1\_xboole\_0\ X1) \vee (X0 \in X1)) \tag{2}$$

Assume the following.

$$((v2\_xxreal\_0\ np\_\_2) \wedge (m2\_subset\_1\ np\_\_2\ k1\_numbers\ k5\_numbers)) \wedge ((m1\_subset\_1\ np\_\_2\ k5\_numbers) \wedge (m1\_subset\_1\ np\_\_2\ k1\_numbers)) \tag{3}$$

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.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0) \wedge ((\neg v1\_xboole\_0\ X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0)))) \Rightarrow (\forall X2.(m2\_subset\_1\ X2\ X0\ X1) \Leftrightarrow (m1\_subset\_1\ X2\ X1)) \tag{5}$$

Assume the following.

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

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k5\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_compos\_1\ k1\_scmpds\_2)) \Rightarrow (\forall X2.((\neg v1\_xboole\_0\ X2) \wedge ((v1\_relat\_1\ X2) \wedge ((v4\_relat\_1\ X2\ k5\_numbers) \wedge ((v5\_relat\_1\ X2\ (u1\_compos\_1\ k1\_scmpds\_2)) \wedge ((v1\_funct\_1\ X2) \wedge ((v1\_finset\_1\ X2) \wedge (v1\_afinsq\_1\ X2)))))))) \Rightarrow (\forall X3.((\neg v1\_xboole\_0\ X3) \wedge ((v1\_relat\_1\ X3) \wedge ((v4\_relat\_1\ X3\ k5\_numbers) \wedge ((v5\_relat\_1\ X3\ (u1\_compos\_1\ k1\_scmpds\_2)) \wedge ((v1\_funct\_1\ X3) \wedge ((v1\_finset\_1\ X3) \wedge (v1\_afinsq\_1\ X3)))))))) \Rightarrow (k5\_card\_1\ (k1\_scmpds\_4\ (k1\_scmpds\_4\ (k2\_scmpds\_4\ X1\ X2)\ (k1\_scmpds\_6\ X0))\ X3) = k2\_nat\_1\ (k2\_nat\_1\ (k5\_card\_1\ X2)\ (k5\_card\_1\ X3))\ np\_\_2)))) \tag{7}$$

Assume the following.

$$(\neg v1\_xboole\_0\ k4\_ordinal1) \wedge (v3\_ordinal1\ k4\_ordinal1) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v1\_ami\_2\ X0) \wedge (m1\_subset\_1\ X0\ (u1\_struct\_0\ k1\_scmpds\_2))) \wedge ((v1\_int\_1\ X1) \wedge (v1\_int\_1\ X2))) \Rightarrow (m1\_subset\_1\ (k7\_scmpds\_2\ X0\ X1\ X2)\ (u1\_compos\_1\ k1\_scmpds\_2)) \tag{9}$$

Assume the following.

$$m1\_subset\_1\ k5\_numbers\ (k1\_zfmisc\_1\ k1\_numbers) \tag{10}$$

Assume the following.

$$\forall X0.(v1\_finset\_1\ X0) \Rightarrow (m1\_subset\_1\ (k5\_card\_1\ X0)\ k4\_ordinal1) \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k5\_numbers) \wedge (v7\_ordinal1\ X1)) \Rightarrow (m2\_subset\_1\ (k2\_nat\_1\ X0\ X1)\ k1\_numbers\ k5\_numbers) \tag{12}$$

Assume the following.

$$\forall X0.((v1\_ami\_2\ X0) \wedge (m1\_subset\_1\ X0\ (u1\_struct\_0\ k1\_scmpds\_2))) \Rightarrow (\forall X1.(v1\_int\_1\ X1) \Rightarrow (\forall X2.((\neg v1\_xboole\_0\ X2) \wedge ((v1\_relat\_1\ X2) \wedge ((v4\_relat\_1\ X2\ k5\_numbers) \wedge ((v5\_relat\_1\ X2\ (u1\_compos\_1\ k1\_scmpds\_2)) \wedge ((v1\_funct\_1\ X2) \wedge ((v1\_finset\_1\ X2) \wedge (v1\_afinsq\_1\ X2)))))))) \Rightarrow (\forall X3.((\neg v1\_xboole\_0\ X3) \wedge ((v1\_relat\_1\ X3) \wedge ((v4\_relat\_1\ X3\ k5\_numbers) \wedge ((v5\_relat\_1\ X3\ (u1\_compos\_1\ k1\_scmpds\_2)) \wedge ((v1\_funct\_1\ X3) \wedge ((v1\_finset\_1\ X3) \wedge (v1\_afinsq\_1\ X3)))))))) \Rightarrow (k2\_scmpds\_6\ X0\ X1\ X2\ X3 = k1\_scmpds\_4\ (k1\_scmpds\_4\ (k2\_scmpds\_4\ (k7\_scmpds\_2\ X0\ X1\ (k2\_nat\_1\ (k5\_card\_1\ X2)\ np\_\_2))\ X2)\ (k1\_scmpds\_6\ (k2\_nat\_1\ (k5\_card\_1\ X3)\ np\_\_1)))\ X3)))) \tag{13}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k5\_numbers)\wedge(v7\_ordinal1\ X1))\Rightarrow(k2\_nat\_1\ X0\ X1 = k2\_nat\_1\ X1\ X0) \tag{14}$$

Assume the following.

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

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(v1\_int\_1\ X0) \tag{16}$$

Theorem 1

$$\forall X0.((v1\_ami\_2\ X0)\wedge(m1\_subset\_1\ X0\ (u1\_struct\_0\ k1\_scmpds\_2)))\Rightarrow(\forall X1.(v1\_int\_1\ X1)\Rightarrow(\forall X2.((\neg v1\_xboole\_0\ X2)\wedge((v1\_relat\_1\ X2)\wedge((v4\_relat\_1\ X2\ k5\_numbers)\wedge((v5\_relat\_1\ X2\ (u1\_compos\_1\ k1\_scmpds\_2))\wedge((v1\_funct\_1\ X2)\wedge((v1\_finset\_1\ X2)\wedge(v1\_afinsq\_1\ X2)))))))\Rightarrow(\forall X3.((\neg v1\_xboole\_0\ X3)\wedge((v1\_relat\_1\ X3)\wedge((v4\_relat\_1\ X3\ k5\_numbers)\wedge((v5\_relat\_1\ X3\ (u1\_compos\_1\ k1\_scmpds\_2))\wedge((v1\_funct\_1\ X3)\wedge((v1\_finset\_1\ X3)\wedge(v1\_afinsq\_1\ X3)))))))\Rightarrow(k5\_card\_1\ (k2\_scmpds\_6\ X0\ X1\ X2\ X3) = k2\_nat\_1\ (k2\_nat\_1\ (k5\_card\_1\ X2)\ (k5\_card\_1\ X3))\ np\_\_2))))$$