t9_finsop_1 (TMLZXYDR-JFq3xsmURRuUmrJJn3omQWRLt9n)

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Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $v2\_binop\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_binop\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k5\_numbers : \iota$ be given. Let $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_binop\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_setwiseo : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np\_\_1 : \iota$ be given. Let $k1\_finsop\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_binop\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $k6\_numbers : \iota$ be given. Let $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4\_ordinal1 : \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v1\_finseq\_1 : \iota \Rightarrow o$ be given. Let $k1\_card\_1 : \iota \Rightarrow \iota$ be given. Let $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $v1\_finset\_1 : \iota \Rightarrow o$ be given. Let $v1\_card\_1 : \iota \Rightarrow o$ be given. Let $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_numbers : \iota$ be given. Let $k2\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $v3\_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow ((\neg r1\_xxreal\_0\ np\_\_1\ X0) \Rightarrow (X0 = k6\_numbers)) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1\ X1\ X0) \Leftrightarrow (m1\_finseq\_1\ X1\ X0) \tag{2}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{3}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_finseq\_1\ X0))) \Rightarrow (k3\_finseq\_1\ X0 = k1\_card\_1\ X0) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1) \wedge (v4\_relat\_1\ X1\ X0)) \Rightarrow (k1\_relset\_1\ X0\ X1 = k9\_xtuple\_0\ X1) \tag{5}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.(m2\_finseq\_1\ X1\ X0)\Rightarrow (\forall X2.(m2\_finseq\_1\ X2\ X0)\Rightarrow(\forall X3.(m2\_finseq\_1\ X3\ X0)\Rightarrow (\forall X4.((v1\_funct\_1\ X4)\wedge((v1\_funct\_2\ X4\ (k2\_zfmisc\_1\ X0\ X0)\ X0)\wedge(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)\ X0)))))\Rightarrow(((v1\_setwiseo\ X4\ X0)\wedge((k3\_finseq\_1\ X1 = k6\_numbers)\wedge((k3\_finseq\_1\ X1 = k3\_finseq\_1\ X2)\wedge(k3\_finseq\_1\ X1 = k3\_finseq\_1\ X3))))\Rightarrow(k1\_finsop\_1\ X0\ X1\ X4 = k5\_binop\_1\ X0\ X4\ (k1\_finsop\_1\ X0\ X2\ X4)\ (k1\_finsop\_1\ X0\ X3\ X4)))))))) \tag{6}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.(m2\_finseq\_1\ X1\ X0)\Rightarrow (\forall X2.(m2\_finseq\_1\ X2\ X0)\Rightarrow(\forall X3.(m2\_finseq\_1\ X3\ X0)\Rightarrow (\forall X4.((v1\_funct\_1\ X4)\wedge((v1\_funct\_2\ X4\ (k2\_zfmisc\_1\ X0\ X0)\ X0)\wedge(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)\ X0)))))\Rightarrow(((v2\_binop\_1\ X4\ X0)\wedge((v1\_binop\_1\ X4\ X0)\wedge((r1\_xxreal\_0\ np\_\_1\ (k3\_finseq\_1\ X1))\wedge((k3\_finseq\_1\ X1 = k3\_finseq\_1\ X2)\wedge((k3\_finseq\_1\ X1 = k3\_finseq\_1\ X3)\wedge(\forall X5.(m1\_subset\_1\ X5\ k5\_numbers)\Rightarrow((X5 \in k1\_relset\_1\ k5\_numbers\ X1)\Rightarrow(k1\_funct\_1\ X3\ X5 = k1\_binop\_1\ X4\ (k1\_funct\_1\ X1\ X5)\ (k1\_funct\_1\ X2\ X5)))))))))\Rightarrow(k1\_finsop\_1\ X0\ X3\ X4 = k5\_binop\_1\ X0\ X4\ (k1\_finsop\_1\ X0\ X1\ X4)\ (k1\_finsop\_1\ X0\ X2\ X4))))))) \tag{7}$$

Assume the following.

$$\forall X0.(v1\_finset\_1\ X0)\Rightarrow((v1\_finset\_1\ (k1\_card\_1\ X0))\wedge(v1\_card\_1\ (k1\_card\_1\ X0))) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1\ X1\ X0)\Rightarrow((v1\_funct\_1\ X1)\wedge((v1\_finseq\_1\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ X0))))) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1\ X1\ X0)\Rightarrow((v1\_relat\_1\ X1)\wedge((v1\_funct\_1\ X1)\wedge(v1\_finseq\_1\ X1))) \tag{10}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_finseq\_1\ X0)))\Rightarrow(m2\_subset\_1\ (k3\_finseq\_1\ X0)\ k1\_numbers\ k5\_numbers) \tag{11}$$

Assume the following.

$$\forall X0.v1\_card\_1\ (k1\_card\_1\ X0) \tag{12}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_finseq\_1\ X0)))\Rightarrow (\forall X1.(m2\_subset\_1\ X1\ k1\_numbers\ k5\_numbers)\Rightarrow((X1 = k3\_finseq\_1\ X0)\Leftrightarrow(k2\_finseq\_1\ X1 = k9\_xtuple\_0\ X0))) \tag{13}$$

Assume the following.

$$\forall X0.((v3\_ordinal1\ X0)\wedge(v1\_finset\_1\ X0))\Rightarrow(v7\_ordinal1\ X0) \tag{14}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_finseq\_1\ X0)))\Rightarrow ((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v1\_funct\_1\ X0)\wedge (v1\_finseq\_1\ X0)))) \tag{15}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_finseq\_1\ X0)))\Rightarrow ((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_finset\_1\ X0))) \tag{16}$$

Assume the following.

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

Theorem 1

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.(m2\_finseq\_1\ X1\ X0)\Rightarrow (\forall X2.(m2\_finseq\_1\ X2\ X0)\Rightarrow(\forall X3.(m2\_finseq\_1\ X3\ X0)\Rightarrow (\forall X4.((v1\_funct\_1\ X4)\wedge((v1\_funct\_2\ X4\ (k2\_zfmisc\_1\ X0\ X0)\ X0)\wedge(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)\ X0)))))\Rightarrow(((v2\_binop\_1\ X4\ X0)\wedge((v1\_binop\_1\ X4\ X0)\wedge((k3\_finseq\_1\ X1 = k3\_finseq\_1\ X2)\wedge((k3\_finseq\_1\ X1 = k3\_finseq\_1\ X3)\wedge(\forall X5.\ (m1\_subset\_1\ X5\ k5\_numbers)\Rightarrow((X5\in k1\_relset\_1\ k5\_numbers\ X1)\Rightarrow (k1\_funct\_1\ X1\ X5 = k1\_binop\_1\ X4\ (k1\_funct\_1\ X2\ X5)\ (k1\_funct\_1\ X3\ X5))))))))\Rightarrow(((\neg v1\_setwiseo\ X4\ X0)\wedge(\neg r1\_xxreal\_0\ np\_\_1\ (k3\_finseq\_1\ X1)))\vee(k1\_finsop\_1\ X0\ X1\ X4 = k5\_binop\_1\ X0\ X4\ (k1\_finsop\_1\ X0\ X2\ X4)\ (k1\_finsop\_1\ X0\ X3\ X4)))))))$$