

t3\_scpisort  
(TMY81neiCMAYPqHbgV3xLCYrYCTWeKGHzuJ)

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Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_numbers : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $r1\_xreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $np\_1 : \iota$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r2\_classes1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k2\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_finseq\_1 : \iota \Rightarrow o$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_numbers : \iota$  be given. Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X2))) \Rightarrow (m1\_subset\_1 X0 X2) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1 X0 X1) \Rightarrow ((v1\_xboole\_0 X1) \vee (X0 \in X1)) \quad (3)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1.((v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1)) \Rightarrow (\forall X2.\forall X3.((k1\_funct\_1 X0 X2 = k1\_funct\_1 X1 X3) \wedge ((k1\_funct\_1 X0 X3 = k1\_funct\_1 X1 X2) \wedge (X2 \in k9\_xtuple\_0 X0) \wedge ((X3 \in k9\_xtuple\_0 X0) \wedge ((k9\_xtuple\_0 X0 = k9\_xtuple\_0 X1) \wedge (\forall X4.(X4 \in k9\_xtuple\_0 X0) \Rightarrow ((X4 = X2) \vee (X4 = X3) \vee (k1\_funct\_1 X0 X4 = k1\_funct\_1 X1 X4)))))))))) \Rightarrow (r2\_classes1 X0 X1)) \quad (4)$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.(v7\_ordinal1\ X1)\Rightarrow((X0 \in k2\_finseq\_1\ X1)\Leftrightarrow((r1\_xreal\_0\ np\_1\ X0)\wedge(r1\_xreal\_0\ X0\ X1)))) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge((\neg v1\_xboole\_0\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))))\Rightarrow(\forall X2.(m2\_subset\_1\ X2\ X0\ X1)\Leftrightarrow(m1\_subset\_1\ X2\ X1)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1\ X1\ X0)\Leftrightarrow(m1\_finseq\_1\ X1\ X0) \quad (7)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (8)$$

Assume the following.

$$(\neg v1\_xboole\_0\ k4\_ordinal1)\wedge(v3\_ordinal1\ k4\_ordinal1) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1\ X1\ X0)\Rightarrow((v1\_funct\_1\ X1)\wedge((v1\_finseq\_1\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ X0)))))) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1\ X1\ X0)\Rightarrow((v1\_relat\_1\ X1)\wedge((v1\_funct\_1\ X1)\wedge(v1\_finseq\_1\ X1))) \quad (11)$$

Assume the following.

$$m1\_subset\_1\ k5\_numbers\ (k1\_zfmisc\_1\ k1\_numbers) \quad (12)$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_finseq\_1\ X0)))\Rightarrow(m2\_subset\_1\ (k3\_finseq\_1\ X0)\ k1\_numbers\ k5\_numbers) \quad (13)$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(m1\_subset\_1\ (k2\_finseq\_1\ X0)\ (k1\_zfmisc\_1\ k5\_numbers)) \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow \\ & (\forall X1.(m2\_subset\_1 X1 k1\_numbers k5\_numbers) \Rightarrow ((X1 = k3\_finseq\_1 \\ & X0) \Leftrightarrow (k2\_finseq\_1 X1 = k9\_xtuple\_0 X0))) \end{aligned} \quad (15)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k4\_ordinal1) \Rightarrow (v7\_ordinal1 X0) \quad (16)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(m2\_finseq\_1 X0 k4\_numbers) \Rightarrow (\forall X1.(m2\_finseq\_1 \\ & X1 k4\_numbers) \Rightarrow (\forall X2.(m1\_subset\_1 X2 k5\_numbers) \Rightarrow (\forall X3. \\ & (m1\_subset\_1 X3 k5\_numbers) \Rightarrow (((r1\_xxreal\_0 np\_1 X3) \wedge ((r1\_xxreal\_0 \\ & X3 (k3\_finseq\_1 X0)) \wedge ((r1\_xxreal\_0 np\_1 X2) \wedge ((r1\_xxreal\_0 X2 \\ & (k3\_finseq\_1 X0)) \wedge ((k3\_finseq\_1 X0 = k3\_finseq\_1 X1) \wedge ((k1\_funct\_1 \\ & X0 X2 = k1\_funct\_1 X1 X3) \wedge ((k1\_funct\_1 X0 X3 = k1\_funct\_1 X1 X2) \wedge ( \\ & \forall X4.(m1\_subset\_1 X4 k5\_numbers) \Rightarrow (((r1\_xxreal\_0 np\_1 \\ & X4) \wedge (r1\_xxreal\_0 X4 (k3\_finseq\_1 X0))) \Rightarrow ((X4 = X2) \vee ((X4 = X3) \vee ( \\ & k1\_funct\_1 X0 X4 = k1\_funct\_1 X1 X4)))))))))) \Rightarrow (r2\_classes1 X0 \\ & X1)))))) \end{aligned}$$