

t53\_prob\_3 (TMGWve-  
JHrb7kZ2uEByddnW5HP5u7Xm8XkT8)

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Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k9\_setfam\_1 : \iota \Rightarrow \iota$  be given. Let  $k7\_prob\_3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_setfam\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k4\_prob\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_setfam\_1 : \iota \Rightarrow \iota$  be given. Let  $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_finseq\_1 : \iota \Rightarrow o$  be given. Let  $k3\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_prob\_3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_prob\_3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (m2\_finseq\_1 X2 (k9\_setfam\_1 \\ & X0)) \Rightarrow ((X2 \neq k1\_xboole\_0) \Rightarrow ((X1 \in k6\_setfam\_1 X0 (k2\_relset\_1 (k9\_setfam\_1 \\ & X0) X2)) \Leftrightarrow (\forall X3. (v7\_ordinal1 X3) \Rightarrow ((X3 \in k1\_relset\_1 k5\_numbers \\ & X2) \Rightarrow (X1 \in k4\_prob\_3 X0 X2 X3)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (m2\_finseq\_1 X2 (k9\_setfam\_1 \\ & X0)) \Rightarrow ((X2 \neq k1\_xboole\_0) \Rightarrow ((X1 \in k7\_prob\_3 X0 X2) \Leftrightarrow (\forall X3. ( \\ & v7\_ordinal1 X3) \Rightarrow ((X3 \in k1\_relset\_1 k5\_numbers X2) \Rightarrow (X1 \in k4\_prob\_3 \\ & X0 X2 X3)))))) \end{aligned} \quad (2)$$

Assume the following.

$$(k9\_xtuple\_0 k1\_xboole\_0 = k1\_xboole\_0) \wedge (k10\_xtuple\_0 k1\_xboole\_0 = k1\_xboole\_0) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (\forall X2. (X2 \in X0) \Leftrightarrow (X2 \in X1)) \Rightarrow (X0 = X1) \quad (4)$$

Assume the following.

$$k1\_setfam\_1 k1\_xboole\_0 = k1\_xboole\_0 \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1 X1 X0)\Leftrightarrow(m1\_finseq\_1 X1 X0) \quad (6)$$

Assume the following.

$$\forall X0.k9\_setfam\_1 X0 = k1\_zfmisc\_1 X0 \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k1\_zfmisc\_1 X0)))\Rightarrow(k6\_setfam\_1 X0 X1 = k1\_setfam\_1 X1) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X1)\wedge(v5\_relat\_1 X1 X0))\Rightarrow(k2\_relset\_1 X0 X1 = k10\_xtuple\_0 X1) \quad (9)$$

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X1)\wedge(v5\_relat\_1 X1 X0))\Rightarrow(m1\_subset\_1 (k2\_relset\_1 X0 X1) (k1\_zfmisc\_1 X0)) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1 X1 (k9\_setfam\_1 X0))\Rightarrow(((X1\neq k1\_xboole\_0)\Rightarrow(k7\_prob\_3 X0 X1 = k3\_subset\_1 X0 (k5\_prob\_3 X0 (k6\_prob\_3 X0 X1))))\wedge((X1 = k1\_xboole\_0)\Rightarrow(k7\_prob\_3 X0 X1 = k1\_xboole\_0))) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1 X1 X0)\Rightarrow(v5\_relat\_1 X1 X0) \quad (13)$$

**Theorem 1**

$$\forall X0.\forall X1.(m2\_finseq\_1 X1 (k9\_setfam\_1 X0))\Rightarrow(k7\_prob\_3 X0 X1 = k6\_setfam\_1 X0 (k2\_relset\_1 (k9\_setfam\_1 X0) X1))$$