t127_seq_4 (TMW6re3wsa26XYsqoFKVpTfy99nu98UXdsQ)

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Let $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_numbers : \iota$ be given. Let $k5\_numbers : \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k14\_seq\_4 : \iota \Rightarrow \iota$ be given. Let $k1\_xboole\_0 : \iota$ be given. Let $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6\_numbers : \iota$ be given. Let $k26\_seq\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_numbers : \iota$ be given. Let $k22\_seq\_4 : \iota \Rightarrow \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $k4\_ordinal1 : \iota$ be given. Let $k5\_seq\_4 : \iota \Rightarrow \iota$ be given. Let $m1\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3\_ordinal1 : \iota \Rightarrow o$ be given. Let $k19\_seq\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(m2\_subset\_1\ X0\ k1\_numbers\ k5\_numbers) \Rightarrow (\forall X1.\ (m2\_finseq\_2\ X1\ k2\_numbers\ (k14\_seq\_4\ X0)) \Rightarrow (r1\_xxreal\_0\ k6\_numbers\ (k22\_seq\_4\ X1))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\neg(X0 \in X1) \wedge (v1\_xboole\_0\ X1) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0)) \Rightarrow (\neg(X1 \neq k1\_xboole\_0) \wedge (\forall X2.(m1\_subset\_1\ X2\ X0) \Rightarrow (\neg X2 \in X1))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X2))) \Rightarrow (m1\_subset\_1\ X0\ X2) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ X1) \Rightarrow ((v1\_xboole\_0\ X1) \vee (X0 \in X1)) \tag{5}$$

Assume the following.

$$m1\_subset\_1\ k1\_xboole\_0\ k4\_ordinal1 \tag{6}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ k1\_numbers))\Rightarrow(\forall X1.\ (m1\_subset\_1\ X1\ k1\_numbers)\Rightarrow((\forall X2.(m1\_subset\_1\ X2\ k1\_numbers)\Rightarrow((X2\in X0)\Rightarrow(r1\_xxreal\_0\ X1\ X2)))\Rightarrow((X0=k1\_xboole\_0)\vee(r1\_xxreal\_0\ X1\ (k5\_seq\_4\ X0))))) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1:\iota\Rightarrow\iota\Rightarrow o.\forall X2:\iota\Rightarrow\iota\Rightarrow\iota.\ \forall X3.\forall X4.m1\_subset\_1\ (ReplSep2\ (toset\ (\lambda X5:\iota.\ m1\_subset\_1\ X5\ X4))\ (\lambda X5:\iota.toset\ (\lambda X6:\iota.m1\_subset\_1\ X6\ X3))\ (\lambda X5:\iota.\lambda X6:\iota.X1\ X5\ X6)\ (\lambda X5:\iota.\lambda X6:\ \iota.X2\ X5\ X6))\ (k1\_zfmisc\_1\ X0) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge((\neg v1\_xboole\_0\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))))\Rightarrow(\forall X2.(m2\_subset\_1\ X2\ X0\ X1)\Leftrightarrow(m1\_subset\_1\ X2\ X1)) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_2\ X1\ X0)\Rightarrow(\forall X2.(m2\_finseq\_2\ X2\ X0\ X1)\Leftrightarrow(m1\_subset\_1\ X2\ X1)) \tag{10}$$

Assume the following.

$$k6\_numbers=k1\_xboole\_0 \tag{11}$$

Assume the following.

$$k5\_numbers=k4\_ordinal1 \tag{12}$$

Assume the following.

$$(\neg v1\_xboole\_0\ k4\_ordinal1)\wedge(v3\_ordinal1\ k4\_ordinal1) \tag{13}$$

Assume the following.

$$v1\_xboole\_0\ k1\_xboole\_0 \tag{14}$$

Assume the following.

$$m1\_subset\_1\ k5\_numbers\ (k1\_zfmisc\_1\ k1\_numbers) \tag{15}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1\_subset\_1\ X0\ k5\_numbers)\wedge((m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k14\_seq\_4\ X0)))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k14\_seq\_4\ X0)))))\Rightarrow(m1\_subset\_1\ (k26\_seq\_4\ X0\ X1\ X2)\ k1\_numbers) \tag{16}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1\_subset\_1\ X0\ k5\_numbers)\wedge ((m1\_subset\_1\ X1\ (k14\_seq\_4\ X0))\wedge(m1\_subset\_1\ X2\ (k14\_seq\_4\ X0))))\Rightarrow (m2\_finseq\_2\ (k19\_seq\_4\ X0\ X1\ X2)\ k2\_numbers\ (k14\_seq\_4\ X0)) \tag{17}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k5\_numbers)\Rightarrow(m1\_finseq\_2\ (k14\_seq\_4\ X0)\ k2\_numbers) \tag{18}$$

Assume the following.

$$\forall X0.(m2\_subset\_1\ X0\ k1\_numbers\ k5\_numbers)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k14\_seq\_4\ X0)))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k14\_seq\_4\ X0)))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ k1\_numbers)\Rightarrow((X3 = k26\_seq\_4\ X0\ X1\ X2)\Leftrightarrow(\forall X4.(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ k1\_numbers))\Rightarrow((X4 = ReplSep2\ (toset\ (\lambda X5 : \iota.\ m2\_finseq\_2\ X5\ k2\_numbers\ (k14\_seq\_4\ X0)))\ (\lambda X5 : \iota.toset\ (\lambda X6 : \iota.m2\_finseq\_2\ X6\ k2\_numbers\ (k14\_seq\_4\ X0)))\ (\lambda X5 : \iota.\lambda X6 : \iota.(X5 \in X1)\wedge(X6 \in X2))\ (\lambda X5 : \iota.\lambda X6 : \iota.k22\_seq\_4\ (k19\_seq\_4\ X0\ X5\ X6)))\Rightarrow(X3 = k5\_seq\_4\ X4)))))))) \tag{19}$$

Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))\Rightarrow(v1\_xboole\_0\ X1)) \tag{20}$$

Theorem 1

$$\forall X0.(m2\_subset\_1\ X0\ k1\_numbers\ k5\_numbers)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k14\_seq\_4\ X0)))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k14\_seq\_4\ X0)))\Rightarrow(\neg(X1 \neq k1\_xboole\_0)\wedge((X2 \neq k1\_xboole\_0)\wedge(\neg r1\_xxreal\_0\ k6\_numbers\ (k26\_seq\_4\ X0\ X1\ X2))))))$$