t3_stirl2_1 (TMQCGDhZbUmQ29kYyaMmDoz14LQmJLkMLSR)

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Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k5\_numbers : \iota$ be given. Let $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_nat\_1 : \iota \Rightarrow \iota$ be given. Let $k4\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $k1\_xboole\_0 : \iota$ be given. Let $k6\_seq\_4 : \iota \Rightarrow \iota$ be given. Let $k4\_ordinal1 : \iota$ be given. Let $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xxreal\_0 : \iota \Rightarrow o$ be given. Let $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6\_numbers : \iota$ be given. Let $k3\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3\_ordinal1 : \iota \Rightarrow o$ be given. Let $k1\_numbers : \iota$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $v3\_membered : \iota \Rightarrow o$ be given. Let $v1\_xreal\_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0) \Rightarrow (X0 = k1\_xboole\_0) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v1\_xboole\_0\ X0) \wedge (m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ k5\_numbers))) \Rightarrow (\forall X1.((\neg v1\_xboole\_0\ X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ k5\_numbers))) \Rightarrow (k6\_nat\_1\ (k6\_seq\_4\ X0)\ (k6\_seq\_4\ X1) = k6\_seq\_4\ (k4\_subset\_1\ k5\_numbers\ X0\ X1))) \tag{2}$$

Assume the following.

$$\forall X0.((\neg v1\_xboole\_0\ X0) \wedge (m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ k5\_numbers))) \Rightarrow (k6\_seq\_4\ X0 = k5\_nat\_1\ X0) \tag{3}$$

Assume the following.

$$m1\_subset\_1\ k1\_xboole\_0\ k4\_ordinal1 \tag{4}$$

Assume the following.

$$\forall X0.k2\_xboole\_0\ X0\ k1\_xboole\_0 = X0 \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xxreal\_0\ X0) \wedge (v1\_xxreal\_0\ X1)) \Rightarrow (r1\_xxreal\_0\ X0\ X0) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge((\neg v1\_xboole\_0\ X1)\wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))))\Rightarrow(\forall X2.(m2\_subset\_1\ X2\ X0\ X1)\Leftrightarrow(m1\_subset\_1\ X2\ X1)) \tag{7}$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k5\_numbers)\wedge(m1\_subset\_1\ X1\ k5\_numbers))\Rightarrow(k6\_nat\_1\ X0\ X1 = k3\_xxreal\_0\ X0\ X1) \tag{9}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ X0)))\Rightarrow(k4\_subset\_1\ X0\ X1\ X2 = k2\_xboole\_0\ X1\ X2) \tag{11}$$

Assume the following.

$$(\neg v1\_xboole\_0\ k4\_ordinal1)\wedge(v3\_ordinal1\ k4\_ordinal1) \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.(\neg v1\_xboole\_0\ X0)\Rightarrow(\neg v1\_xboole\_0\ (k2\_xboole\_0\ X1\ X0)) \tag{13}$$

Assume the following.

$$m2\_subset\_1\ k6\_numbers\ k1\_numbers\ k5\_numbers \tag{14}$$

Assume the following.

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

Assume the following.

$$\forall X0.m2\_subset\_1\ (k5\_nat\_1\ X0)\ k1\_numbers\ k5\_numbers \tag{16}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ X0)))\Rightarrow(m1\_subset\_1\ (k4\_subset\_1\ X0\ X1\ X2)\ (k1\_zfmisc\_1\ X0)) \tag{17}$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0\ X0)\Rightarrow(\forall X1.(v1\_xxreal\_0\ X1)\Rightarrow((r1\_xxreal\_0\ X0\ X1)\Rightarrow(k3\_xxreal\_0\ X0\ X1 = X0))\wedge((\neg r1\_xxreal\_0\ X0\ X1)\Rightarrow(k3\_xxreal\_0\ X0\ X1 = X1))))) \tag{18}$$

Assume the following.

$$k1\_xboole\_0 = the\ (\lambda X0 : \iota.v1\_xboole\_0\ X0) \tag{19}$$

Assume the following.

$$\forall X0.\forall X1.(m2\_subset\_1\ X1\ k1\_numbers\ k5\_numbers)\Rightarrow((((\neg v1\_xboole\_0\ X0)\wedge(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ k5\_numbers)))\Rightarrow((X1 = k5\_nat\_1\ X0)\Leftrightarrow((X1 \in X0)\wedge(\forall X2.(v7\_ordinal1\ X2)\Rightarrow((X2 \in X0)\Rightarrow(r1\_xxreal\_0\ X1\ X2))))))\wedge((\neg(\neg v1\_xboole\_0\ X0)\wedge(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ k5\_numbers)))\Rightarrow((X1 = k5\_nat\_1\ X0)\Leftrightarrow(X1 = k6\_numbers)))) \tag{20}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xxreal\_0\ X0)\wedge(v1\_xxreal\_0\ X1))\Rightarrow((r1\_xxreal\_0\ X0\ X1)\vee(r1\_xxreal\_0\ X1\ X0)) \tag{21}$$

Assume the following.

$$\forall X0.\forall X1.k2\_xboole\_0\ X0\ X1 = k2\_xboole\_0\ X1\ X0 \tag{22}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ k1\_numbers))\Rightarrow(v3\_membered\ X0) \tag{23}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(v1\_xxreal\_0\ X0) \tag{24}$$

Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))\Rightarrow(v1\_xboole\_0\ X1)) \tag{25}$$

Assume the following.

$$\forall X0.(v3\_membered\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ X0)\Rightarrow(v1\_xreal\_0\ X1)) \tag{26}$$

Theorem 1

$$\forall X0.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ k5\_numbers))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ k5\_numbers))\Rightarrow(r1\_xxreal\_0\ (k6\_nat\_1\ (k5\_nat\_1\ X0)\ (k5\_nat\_1\ X1))\ (k5\_nat\_1\ (k4\_subset\_1\ k5\_numbers\ X0\ X1))))$$