t36_entropy1 (TMF1GAqbCLSfYSpmKfBDGY3LmNwvgZzgPwp)

October 27, 2020

Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v1\_matrix\_1 : \iota \Rightarrow o$ be given. Let $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_finseq\_2 : \iota \Rightarrow \iota$ be given. Let $k3\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k1\_matrprob : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. 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 $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_matrix\_1 : \iota \Rightarrow \iota$ be given. Let $k7\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_matrix\_1 : \iota \Rightarrow \iota$ be given. Let $k4\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k3\_matrix\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_xboole\_0 : \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4\_ordinal1 : \iota$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $k2\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k6\_numbers : \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_finseq\_1 : \iota \Rightarrow o$ be given. Let $v1\_xxreal\_0 : \iota \Rightarrow o$ be given. Let $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k13\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k1\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $v3\_ordinal1 : \iota \Rightarrow o$ be given. Let $v3\_card\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_tarski : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\neg(X0 \in X1) \wedge (v1\_xboole\_0\ X1) \tag{1}$$

Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0) \Rightarrow (X0 = k1\_xboole\_0) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\neg(X0 \in X1) \wedge ((m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X2)) \wedge (v1\_xboole\_0\ X2)) \tag{3}$$

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.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ X1))\Leftrightarrow(r1\_tarski\ X0\ X1) \tag{5}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.((v1\_matrix\_1\ X1)\wedge(m2\_finseq\_1\ X1\ (k3\_finseq\_2\ X0)))\Rightarrow(\forall X2.(m2\_finseq\_1\ X2\ (k3\_finseq\_2\ X0))\Rightarrow(((k3\_finseq\_1\ X2 = k3\_finseq\_1\ X1)\wedge((k1\_matrprob\ X0\ X2\ np\_\_1 = k1\_matrprob\ X0\ X1\ np\_\_1)\wedge(\forall X3.(m2\_subset\_1\ X3\ k1\_numbers\ k5\_numbers)\Rightarrow((r1\_xxreal\_0\ np\_\_1\ X3)\Rightarrow((r1\_xxreal\_0\ (k3\_finseq\_1\ X1)\ X3)\vee(k1\_matrprob\ X0\ X2\ (k2\_nat\_1\ X3\ np\_\_1) = k8\_finseq\_1\ X0\ (k1\_matrprob\ X0\ X2\ X3)\ (k1\_matrprob\ X0\ X1\ (k2\_nat\_1\ X3\ np\_\_1))))))))\Rightarrow(\forall X3.(m2\_subset\_1\ X3\ k1\_numbers\ k5\_numbers)\Rightarrow(\forall X4.(m2\_subset\_1\ X4\ k1\_numbers\ k5\_numbers)\Rightarrow((k4\_tarski\ X3\ X4\in k2\_matrix\_1\ X1)\Rightarrow((k7\_real\_1\ (k8\_real\_1\ (k9\_real\_1\ X3\ np\_\_1)\ (k1\_matrix\_1\ X1))\ X4\in k4\_finseq\_1\ (k1\_matrprob\ X0\ X2\ X3))\wedge(k3\_matrix\_1\ X0\ X1\ X3\ X4 = k1\_funct\_1\ (k1\_matrprob\ X0\ X2\ X3)\ (k7\_real\_1\ (k8\_real\_1\ (k9\_real\_1\ X3\ np\_\_1)\ (k1\_matrix\_1\ X1))\ X4)))))))))) \tag{6}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.((v1\_matrix\_1\ X1)\wedge(m2\_finseq\_1\ X1\ (k3\_finseq\_2\ X0)))\Rightarrow(\forall X2.(m2\_finseq\_1\ X2\ (k3\_finseq\_2\ X0))\Rightarrow(((k3\_finseq\_1\ X2 = k3\_finseq\_1\ X1)\wedge((k1\_matrprob\ X0\ X2\ np\_\_1 = k1\_matrprob\ X0\ X1\ np\_\_1)\wedge(\forall X3.(m2\_subset\_1\ X3\ k1\_numbers\ k5\_numbers)\Rightarrow((r1\_xxreal\_0\ np\_\_1\ X3)\Rightarrow((r1\_xxreal\_0\ (k3\_finseq\_1\ X1)\ X3)\vee(k1\_matrprob\ X0\ X2\ (k2\_nat\_1\ X3\ np\_\_1) = k8\_finseq\_1\ X0\ (k1\_matrprob\ X0\ X2\ X3)\ (k1\_matrprob\ X0\ X1\ (k2\_nat\_1\ X3\ np\_\_1))))))))\Rightarrow(\forall X3.(m2\_subset\_1\ X3\ k1\_numbers\ k5\_numbers)\Rightarrow(\forall X4.(m2\_subset\_1\ X4\ k1\_numbers\ k5\_numbers)\Rightarrow(((X3\in k4\_finseq\_1\ X2)\wedge((X4\in k4\_finseq\_1\ X2)\wedge(r1\_xxreal\_0\ X3\ X4)))\Rightarrow(\forall X5.(m2\_subset\_1\ X5\ k1\_numbers\ k5\_numbers)\Rightarrow((X5\in k4\_finseq\_1\ (k1\_matrprob\ X0\ X2\ X3))\Rightarrow(k1\_funct\_1\ (k1\_matrprob\ X0\ X2\ X3)\ X5 = k1\_funct\_1\ (k1\_matrprob\ X0\ X2\ X4)\ X5))))))))) \tag{7}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.((v1\_matrix\_1\ X1)\wedge (m2\_finseq\_1\ X1\ (k3\_finseq\_2\ X0)))\Rightarrow(\forall X2.(m2\_finseq\_1\ X2\ (k3\_finseq\_2\ X0))\Rightarrow(((k3\_finseq\_1\ X2 = k3\_finseq\_1\ X1)\wedge((k1\_matrprob\ X0\ X2\ np\_\_1 = k1\_matrprob\ X0\ X1\ np\_\_1)\wedge(\forall X3.(m2\_subset\_1\ X3\ k1\_numbers\ k5\_numbers)\Rightarrow((r1\_xxreal\_0\ np\_\_1\ X3)\Rightarrow((r1\_xxreal\_0\ (k3\_finseq\_1\ X1)\ X3)\vee(k1\_matrprob\ X0\ X2\ (k2\_nat\_1\ X3\ np\_\_1) = k8\_finseq\_1\ X0\ (k1\_matrprob\ X0\ X2\ X3)\ (k1\_matrprob\ X0\ X1\ (k2\_nat\_1\ X3\ np\_\_1))))))))\Rightarrow (\forall X3.(m2\_subset\_1\ X3\ k1\_numbers\ k5\_numbers)\Rightarrow(\forall X4.(m2\_subset\_1\ X4\ k1\_numbers\ k5\_numbers)\Rightarrow(((X3 \in k4\_finseq\_1\ X2)\wedge((X4 \in k4\_finseq\_1\ X2)\wedge(r1\_xxreal\_0\ X3\ X4)))\Rightarrow(r1\_tarski\ (k4\_finseq\_1\ (k1\_matrprob\ X0\ X2\ X3))\ (k4\_finseq\_1\ (k1\_matrprob\ X0\ X2\ X4)))))))) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ X1)\Rightarrow((v1\_xboole\_0\ X1)\vee (X0 \in X1)) \tag{9}$$

Assume the following.

$$m1\_subset\_1\ k1\_xboole\_0\ k4\_ordinal1 \tag{10}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.(v7\_ordinal1\ X1)\Rightarrow((X0 \in k2\_finseq\_1\ X1)\Leftrightarrow((r1\_xxreal\_0\ np\_\_1\ X0)\wedge(r1\_xxreal\_0\ X0\ X1)))) \tag{11}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow((\neg r1\_xxreal\_0\ np\_\_1\ X0)\Rightarrow(X0 = k6\_numbers)) \tag{12}$$

Assume the following.

$$\forall X0.(m2\_subset\_1\ X0\ k1\_numbers\ k5\_numbers)\Rightarrow(\forall X1.(m2\_subset\_1\ X1\ k1\_numbers\ k5\_numbers)\Rightarrow(\forall X2.((v1\_relat\_1\ X2)\wedge((v1\_funct\_1\ X2)\wedge((v1\_finseq\_1\ X2)\wedge(v1\_matrix\_1\ X2))))\Rightarrow((k4\_tarski\ X0\ X1 \in k2\_matrix\_1\ X2)\Leftrightarrow((X0 \in k2\_finseq\_1\ (k3\_finseq\_1\ X2))\wedge(X1 \in k2\_finseq\_1\ (k1\_matrix\_1\ X2)))))) \tag{13}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xxreal\_0\ X0)\wedge(v1\_xxreal\_0\ X1))\Rightarrow(r1\_xxreal\_0\ X0\ X0) \tag{14}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge((\neg v1\_xboole\_0\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))))\Rightarrow(\forall X2.(m2\_subset\_1\ X2\ X0\ X1)\Leftrightarrow(m1\_subset\_1\ X2\ X1)) \tag{15}$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1\ X1\ X0) \Leftrightarrow (m1\_finseq\_1\ X1\ X0) \tag{16}$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \tag{17}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{18}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_finseq\_1\ X0))) \Rightarrow (k4\_finseq\_1\ X0 = k9\_xtuple\_0\ X0) \tag{19}$$

Assume the following.

$$\forall X0.k3\_finseq\_2\ X0 = k13\_finseq\_1\ X0 \tag{20}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (k2\_finseq\_1\ X0 = k1\_finseq\_1\ X0) \tag{21}$$

Assume the following.

$$(\neg v1\_xboole\_0\ k4\_ordinal1) \wedge (v3\_ordinal1\ k4\_ordinal1) \tag{22}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (v3\_card\_1\ (k1\_finseq\_1\ X0)\ X0) \tag{23}$$

Assume the following.

$$v1\_xboole\_0\ k1\_xboole\_0 \tag{24}$$

Assume the following.

$$\neg v1\_xboole\_0\ k1\_numbers \tag{25}$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1\ X1\ X0) \Rightarrow ((v1\_funct\_1\ X1) \wedge ((v1\_finseq\_1\ X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ X0))))) \tag{26}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1\ X1\ X0) \Rightarrow ((v1\_relat\_1\ X1) \wedge ((v1\_funct\_1\ X1) \wedge (v1\_finseq\_1\ X1))) \tag{27}$$

Assume the following.

$$m1\_subset\_1\ k5\_numbers\ (k1\_zfmisc\_1\ k1\_numbers) \tag{28}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_finseq\_1\ X0)))\Rightarrow (m1\_subset\_1\ (k4\_finseq\_1\ X0)\ (k1\_zfmisc\_1\ k5\_numbers)) \tag{29}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_finseq\_1\ X0)))\Rightarrow (m2\_subset\_1\ (k3\_finseq\_1\ X0)\ k1\_numbers\ k5\_numbers) \tag{30}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1\_finseq\_1\ X1\ (k3\_finseq\_2\ X0))\wedge(v7\_ordinal1\ X2))\Rightarrow(m2\_finseq\_1\ (k1\_matrprob\ X0\ X1\ X2)\ X0) \tag{31}$$

Assume the following.

$$\forall X0.\forall X1.k4\_tarski\ X0\ X1 = k2\_tarski\ (k2\_tarski\ X0\ X1)\ (k1\_tarski\ X0) \tag{32}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_finseq\_1\ X0)))\Rightarrow (\forall X1.(m2\_subset\_1\ X1\ k1\_numbers\ k5\_numbers)\Rightarrow((X1 = k3\_finseq\_1\ X0)\Leftrightarrow(k2\_finseq\_1\ X1 = k9\_xtuple\_0\ X0))) \tag{33}$$

Assume the following.

$$\forall X0.\forall X1.k2\_tarski\ X0\ X1 = k2\_tarski\ X1\ X0 \tag{34}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k4\_ordinal1)\Rightarrow(v7\_ordinal1\ X0) \tag{35}$$

Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0)\Rightarrow(v7\_ordinal1\ X0) \tag{36}$$

Assume the following.

$$\forall X0.(v3\_card\_1\ X0\ k1\_xboole\_0)\Rightarrow(v1\_xboole\_0\ X0) \tag{37}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(v1\_xxreal\_0\ X0) \tag{38}$$

Theorem 1

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.((v1\_matrix\_1\ X1)\wedge (m2\_finseq\_1\ X1\ (k3\_finseq\_2\ X0)))\Rightarrow(\forall X2.(m2\_finseq\_1\ X2\ (k3\_finseq\_2\ X0))\Rightarrow(((k3\_finseq\_1\ X2 = k3\_finseq\_1\ X1)\wedge((k1\_matrprob\ X0\ X2\ np\_\_1 = k1\_matrprob\ X0\ X1\ np\_\_1)\wedge(\forall X3.(m2\_subset\_1\ X3\ k1\_numbers\ k5\_numbers)\Rightarrow((r1\_xxreal\_0\ np\_\_1\ X3)\Rightarrow((r1\_xxreal\_0\ (k3\_finseq\_1\ X1)\ X3)\vee(k1\_matrprob\ X0\ X2\ (k2\_nat\_1\ X3\ np\_\_1) = k8\_finseq\_1\ X0\ (k1\_matrprob\ X0\ X2\ X3)\ (k1\_matrprob\ X0\ X1\ (k2\_nat\_1\ X3\ np\_\_1))))))))\Rightarrow(\forall X3.(m2\_subset\_1\ X3\ k1\_numbers\ k5\_numbers)\Rightarrow(\forall X4.(m2\_subset\_1\ X4\ k1\_numbers\ k5\_numbers)\Rightarrow((k4\_tarski\ X3\ X4\in k2\_matrix\_1\ X1)\Rightarrow((k7\_real\_1\ (k8\_real\_1\ (k9\_real\_1\ X3\ np\_\_1)\ (k1\_matrix\_1\ X1))\ X4\in k4\_finseq\_1\ (k1\_matrprob\ X0\ X2\ (k3\_finseq\_1\ X1)))\wedge(k3\_matrix\_1\ X0\ X1\ X3\ X4 = k1\_funct\_1\ (k1\_matrprob\ X0\ X2\ (k3\_finseq\_1\ X1))\ (k7\_real\_1\ (k8\_real\_1\ (k9\_real\_1\ X3\ np\_\_1)\ (k1\_matrix\_1\ X1))\ X4)))))))))$$