t53_entropy1 (TMH3AesFbEpF6Yv3DBUhxsRTE86A9sSx5Qv)

October 27, 2020

Let $v1\_matrix\_1 : \iota \Rightarrow o$ be given. Let $v2\_matrprob : \iota \Rightarrow o$ be given. Let $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_finseq\_2 : \iota \Rightarrow \iota$ be given. Let $k1\_numbers : \iota$ be given. Let $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_numbers : \iota$ be given. Let $k4\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k8\_matrix\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_entropy1 : \iota \Rightarrow \iota$ be given. Let $k4\_entropy1 : \iota \Rightarrow \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $v1\_finseq\_1 : \iota \Rightarrow o$ be given. Let $k3\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4\_ordinal1 : \iota$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_matrprob : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_matrix\_1 : \iota \Rightarrow \iota$ be given. Let $k14\_rvsum\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_entropy1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_2 : \iota$ be given. Assume the following.

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

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_finseq\_1\ X0))) \Rightarrow (\forall X1.((v1\_relat\_1\ X1) \wedge ((v1\_funct\_1\ X1) \wedge (v1\_finseq\_1\ X1))) \Rightarrow ((k3\_finseq\_1\ X0 = k3\_finseq\_1\ X1) \Leftrightarrow (k1\_relset\_1\ k5\_numbers\ X0 = k1\_relset\_1\ k5\_numbers\ X1))) \tag{2}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.((v1\_matrix\_1\ X1) \wedge (m2\_finseq\_1\ X1\ (k3\_finseq\_2\ X0))) \Rightarrow (\forall X2.(v7\_ordinal1\ X2) \Rightarrow ((X2 \in k4\_finseq\_1\ X1) \Rightarrow (k1\_funct\_1\ X1\ X2 = k8\_matrix\_1\ X0\ X1\ X2)))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge((\neg v1\_xboole\_0\ X1)\wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))))\Rightarrow(\forall X2.(m2\_subset\_1\ X2\ X0\ X1)\Leftrightarrow(m1\_subset\_1\ X2\ X1)) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1\ X1\ X0)\Leftrightarrow(m1\_finseq\_1\ X1\ X0) \tag{5}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{6}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_finseq\_1\ X0)))\Rightarrow (k4\_finseq\_1\ X0 = k9\_xtuple\_0\ X0) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1)\wedge(v4\_relat\_1\ X1\ X0))\Rightarrow(k1\_relset\_1\ X0\ X1 = k9\_xtuple\_0\ X1) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1\_finseq\_1\ X1\ (k3\_finseq\_2\ X0))\wedge(v7\_ordinal1\ X2))\Rightarrow(k1\_matrprob\ X0\ X1\ X2 = k1\_funct\_1\ X1\ X2) \tag{9}$$

Assume the following.

$$\neg v1\_xboole\_0\ k1\_numbers \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1\ X1\ X0)\Rightarrow((v1\_funct\_1\ X1)\wedge((v1\_finseq\_1\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ X0))))) \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1\ X1\ X0)\Rightarrow((v1\_relat\_1\ X1)\wedge((v1\_funct\_1\ X1)\wedge(v1\_finseq\_1\ X1))) \tag{12}$$

Assume the following.

$$m1\_subset\_1\ k5\_numbers\ (k1\_zfmisc\_1\ k1\_numbers) \tag{13}$$

Assume the following.

$$\forall X0.((v1\_matrix\_1\ X0)\wedge(m1\_finseq\_1\ X0\ (k3\_finseq\_2\ k1\_numbers)))\Rightarrow ((v1\_matrix\_1\ (k5\_entropy1\ X0))\wedge(m2\_finseq\_1\ (k5\_entropy1\ X0)\ (k3\_finseq\_2\ k1\_numbers))) \tag{14}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_finseq\_1\ X0)))\Rightarrow (m1\_subset\_1\ (k4\_finseq\_1\ X0)\ (k1\_zfmisc\_1\ k5\_numbers)) \tag{15}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1\_finseq\_1\ X1\ (k3\_finseq\_2\ X0))\wedge(v7\_ordinal1\ X2))\Rightarrow(m2\_finseq\_1\ (k1\_matrprob\ X0\ X1\ X2)\ X0) \tag{16}$$

Assume the following.

$$\forall X0.((v1\_matrix\_1\ X0)\wedge(m2\_finseq\_1\ X0\ (k3\_finseq\_2\ k1\_numbers)))\Rightarrow ((v2\_matrprob\ X0)\Rightarrow(\forall X1.((v1\_matrix\_1\ X1)\wedge(m2\_finseq\_1\ X1\ (k3\_finseq\_2\ k1\_numbers)))\Rightarrow((X1 = k5\_entropy1\ X0)\Leftrightarrow((k3\_finseq\_1\ X1 = k3\_finseq\_1\ X0)\wedge((k1\_matrix\_1\ X1 = k1\_matrix\_1\ X0)\wedge(\forall X2.\ (m2\_subset\_1\ X2\ k1\_numbers\ k5\_numbers)\Rightarrow((X2 \in k4\_finseq\_1\ X1)\Rightarrow (k1\_matrprob\ k1\_numbers\ X1\ X2 = k14\_rvsum\_1\ (k8\_matrix\_1\ k1\_numbers\ X0\ X2)\ (k3\_entropy1\ np\_\_2\ (k8\_matrix\_1\ k1\_numbers\ X0\ X2)))))))))) \tag{17}$$

Assume the following.

$$\forall X0.(m2\_finseq\_1\ X0\ k1\_numbers)\Rightarrow(k4\_entropy1\ X0 = k14\_rvsum\_1\ X0\ (k3\_entropy1\ np\_\_2\ X0)) \tag{18}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k4\_ordinal1)\Rightarrow(v7\_ordinal1\ X0) \tag{19}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_finseq\_1\ X0)))\Rightarrow ((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v1\_funct\_1\ X0)\wedge (v1\_finseq\_1\ X0)))) \tag{20}$$

Theorem 1

$$\forall X0.((v1\_matrix\_1\ X0)\wedge((v2\_matrprob\ X0)\wedge(m2\_finseq\_1\ X0\ (k3\_finseq\_2\ k1\_numbers))))\Rightarrow(\forall X1.(m2\_subset\_1\ X1\ k1\_numbers\ k5\_numbers)\Rightarrow((X1 \in k4\_finseq\_1\ X0)\Rightarrow(k8\_matrix\_1\ k1\_numbers\ (k5\_entropy1\ X0)\ X1 = k4\_entropy1\ (k8\_matrix\_1\ k1\_numbers\ X0\ X1))))$$