t42_entropy1 (TMFRRAsFK-SZajV5RaZUsWeuwKdEfB5d6EbN)

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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 $k1\_numbers : \iota$ be given. Let $k5\_matrprob : \iota \Rightarrow \iota$ be given. Let $k18\_rvsum\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_entropy1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k6\_numbers : \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $k1\_xboole\_0 : \iota$ 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 $k5\_numbers : \iota$ 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 $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$k18\_rvsum\_1\ (k6\_finseq\_1\ k1\_numbers) = k6\_numbers \tag{1}$$

Assume the following.

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

Assume the following.

$$\forall X0.((v1\_matrix\_1\ X0) \wedge (m2\_finseq\_1\ X0\ (k3\_finseq\_2\ k1\_numbers))) \Rightarrow (\forall X1.(m2\_finseq\_1\ X1\ (k3\_finseq\_2\ k1\_numbers)) \Rightarrow (((k3\_finseq\_1\ X1 = k3\_finseq\_1\ X0) \wedge ((k1\_matrprob\ k1\_numbers\ X1\ np\_\_1 = k1\_matrprob\ k1\_numbers\ X0\ np\_\_1) \wedge (\forall X2.(m2\_subset\_1\ X2\ k1\_numbers\ k5\_numbers) \Rightarrow ((r1\_xxreal\_0\ np\_\_1\ X2) \Rightarrow ((r1\_xxreal\_0\ (k3\_finseq\_1\ X0)\ X2) \vee (k1\_matrprob\ k1\_numbers\ X1\ (k2\_nat\_1\ X2\ np\_\_1) = k8\_finseq\_1\ k1\_numbers\ (k1\_matrprob\ k1\_numbers\ X1\ X2)\ (k1\_matrprob\ k1\_numbers\ X0\ (k2\_nat\_1\ X2\ np\_\_1))))))))) \Rightarrow (k5\_matrprob\ X0 = k18\_rvsum\_1\ (k1\_matrprob\ k1\_numbers\ X1\ (k3\_finseq\_1\ X0))))) \tag{3}$$

Assume the following.

$$\forall X0.((v1\_matrix\_1\ X0) \wedge (m2\_finseq\_1\ X0\ (k3\_finseq\_2\ k1\_numbers))) \Rightarrow ((k3\_finseq\_1\ X0 = k6\_numbers) \Rightarrow (k5\_matrprob\ X0 = k6\_numbers)) \tag{4}$$

Assume the following.

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

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \tag{6}$$

Assume the following.

$$\forall X0.v1\_xboole\_0\ (k6\_finseq\_1\ X0) \tag{7}$$

Assume the following.

$$\neg v1\_xboole\_0\ k1\_numbers \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge((v1\_matrix\_1\ X1)\wedge (m1\_finseq\_1\ X1\ (k3\_finseq\_2\ X0))))\Rightarrow(m2\_finseq\_1\ (k2\_entropy1\ X0\ X1)\ X0) \tag{9}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.((v1\_matrix\_1\ X1)\wedge (m2\_finseq\_1\ X1\ (k3\_finseq\_2\ X0)))\Rightarrow(\forall X2.(m2\_finseq\_1\ X2\ X0)\Rightarrow(((k3\_finseq\_1\ X1 = k6\_numbers)\Rightarrow((X2 = k2\_entropy1\ X0\ X1)\Leftrightarrow (X2 = k1\_xboole\_0)))\wedge((k3\_finseq\_1\ X1\neq k6\_numbers)\Rightarrow((X2 = k2\_entropy1\ X0\ X1)\Leftrightarrow(\exists X3.(m2\_finseq\_1\ X3\ (k3\_finseq\_2\ X0))\wedge((X2 = k1\_matrprob\ X0\ X3\ (k3\_finseq\_1\ X1))\wedge((k3\_finseq\_1\ X3 = k3\_finseq\_1\ X1)\wedge((k1\_matrprob\ X0\ X3\ np\_\_1 = k1\_matrprob\ X0\ X1\ np\_\_1)\wedge(\forall X4.(m2\_subset\_1\ X4\ k1\_numbers\ k5\_numbers)\Rightarrow((r1\_xxreal\_0\ np\_\_1\ X4)\Rightarrow((r1\_xxreal\_0\ (k3\_finseq\_1\ X1)\ X4)\vee(k1\_matrprob\ X0\ X3\ (k2\_nat\_1\ X4\ np\_\_1) = k8\_finseq\_1\ X0\ (k1\_matrprob\ X0\ X3\ X4)\ (k1\_matrprob\ X0\ X1\ (k2\_nat\_1\ X4\ np\_\_1))))))))))))))) \tag{10}$$

Theorem 1

$$\forall X0.((v1\_matrix\_1\ X0)\wedge(m2\_finseq\_1\ X0\ (k3\_finseq\_2\ k1\_numbers)))\Rightarrow (k5\_matrprob\ X0 = k18\_rvsum\_1\ (k2\_entropy1\ k1\_numbers\ X0))$$