

t30_matrprob (TM-
cTG4WYfZbhtUbbj6Qnu466MmZsb1x6aYY)

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Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k14_rvsum_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k3_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k35_binop_2 : \iota$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(\neg v1_xboole_0 X1) \Rightarrow \\ & (\forall X2.(\neg v1_xboole_0 X2) \Rightarrow (\forall X3.((v1_relat_1 X3) \wedge \\ & ((v1_funct_1 X3) \wedge (v1_finseq_1 X3)))) \Rightarrow (\forall X4.((v1_funct_1 \\ & X4) \wedge ((v1_funct_2 X4 (k2_zfmisc_1 X0 X1) X2) \wedge (m1_subset_1 X4 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (k2_zfmisc_1 X0 X1) X2)))))) \Rightarrow (\forall X5.(m2_finseq_1 \\ & X5 X0) \Rightarrow (\forall X6.(m2_finseq_1 X6 X1) \Rightarrow (((k3_finseq_1 X5 = k3_finseq_1 \\ & X6) \wedge (X3 = k3_funcop_1 X4 X5 X6)) \Rightarrow ((k3_finseq_1 X3 = k3_finseq_1 \\ & X5) \wedge (k3_finseq_1 X3 = k3_finseq_1 X6))))))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (2)$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Rightarrow ((v1_funct_1 X1) \wedge ((v1_finseq_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X0)))))) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (m1_finseq_1 X1 X0) \Rightarrow ((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \quad (5)$$

Assume the following.

$$(v1_funct_1\ k35_binop_2) \wedge ((v1_funct_2\ k35_binop_2\ (k2_zfmisc_1\ k1_numbers\ k1_numbers)\ k1_numbers) \wedge (m1_subset_1\ k35_binop_2\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k2_zfmisc_1\ k1_numbers\ k1_numbers)\ k1_numbers)))) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(((v1_relat_1\ X0) \wedge ((v1_funct_1\ X0) \wedge ((v3_valued_0\ X0) \wedge (v1_finseq_1\ X0)))) \wedge ((v1_relat_1\ X1) \wedge ((v1_funct_1\ X1) \wedge ((v3_valued_0\ X1) \wedge (v1_finseq_1\ X1)))))) \Rightarrow (m2_finseq_1\ (k14_rsum_1\ X0\ X1)\ k1_numbers) \quad (7)$$

Assume the following.

$$\forall X0.((v1_relat_1\ X0) \wedge ((v1_funct_1\ X0) \wedge ((v3_valued_0\ X0) \wedge (v1_finseq_1\ X0)))) \Rightarrow (\forall X1.((v1_relat_1\ X1) \wedge ((v1_funct_1\ X1) \wedge ((v3_valued_0\ X1) \wedge (v1_finseq_1\ X1)))) \Rightarrow (k14_rsum_1\ X0\ X1 = k3_funcop_1\ k35_binop_2\ X0\ X1)) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1\ X1\ X0) \Rightarrow (v5_relat_1\ X1\ X0) \quad (9)$$

Assume the following.

$$\forall X0.((v1_relat_1\ X0) \wedge (v5_relat_1\ X0\ k1_numbers)) \Rightarrow ((v1_relat_1\ X0) \wedge (v3_valued_0\ X0)) \quad (10)$$

Theorem 1

$$\forall X0.(m2_finseq_1\ X0\ k1_numbers) \Rightarrow (\forall X1.(m2_finseq_1\ X1\ k1_numbers) \Rightarrow ((k3_finseq_1\ X0 = k3_finseq_1\ X1) \Rightarrow (k3_finseq_1\ (k14_rsum_1\ X0\ X1) = k3_finseq_1\ X0)))$$